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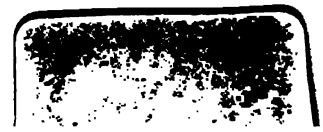

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EDWARD I. SEARS, LL.D.

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IN instituting a comparison between the first empire and the second, care must be taken to distinguish between actual and merely apparent resemblances. Thus, for instance, the first Napoleon became emperor of the French; so did the third, and to this extent their career is parallel; but when we penetrate beneath the surface, we find that the one was emperor in a very different sense of the word from the other. The first rose to his proud eminence through the force of his genius, and maintained his position through the force of his character. The second attained to the imperial crown through the prestige of a name which he had done nothing to distinguish, and to which, indeed, it is contended by some, he had no right by birth; and he was kept in his position by the

unscrupulous energy and abilities of a knot of personal adherents who made use of him for their own ends.

The future historian and moralist, contemplating the drama of the second empire, will one day inquire how it happened that a man, holding in his hand the control of the world, a sovereign whom nations and kings were accustomed to look upon as the arbiter of Europe, a conqueror who was supposed to be at the head of an invincible army, fell in an instant, in a ridiculous catastrophe. The first empire required the united forces of Europe to extinguish it, and although it went down in blood, as did the second, the catastrophe was distinguished by genius and heroism; but what is to be said of Sedan after Waterloo? "What have you done with France?" was the tremendous question asked of Napoleon III. by the Duke d'Aumale, and never answered. But history has but too plainly replied to it.

One of the first things that strikes us, in considering the parallelism of the two empires, is the fact that they were both the creatures of revolution; not of such a revolution as displaces one royal dynasty to replace it with another, as was the case in England in 1688, but of such a one as is beheld when a nation, maddened by long ages of tyranny, turns like a wild beast upon its tormentors, and tears them to pieces. Such was the French Revolution of 1798, and such, on a smaller scale, were those of 1830 and 1848. The turbulent state of France was a necessary condition precedent to the rise of the Bonapartes. Had that country remained as apathetic as it was in the days of Louis XV., the world would not have seen an obscure lieutenant of artillery rise to the dignity of general, then First Consul, and then Emperor, within the short space of ten years. It is curious to speculate upon what might have been. Mr. Haswell, in his History of Napoleon III.,* relates the following anecdotes of the first Napoleon, which we do not remember to have met with elsewhere:

"Admiral Crosby told me (the Rev. Thomas Belsham) one circum-

* Introduction.

stance which was curious. When he was commander-in-chief in the Mediterranean, during the late war, at the time we (the English) were in possession of Corsica,* and when Sir Gilbert Elliott was governor-general of the island, General Paoli introduced Bonaparte, then a young man, to the governor and to the admiral, as a friend of his who would be glad to be employed in the service of England; but these wise men, not having Lavater's skill in physiognomy, rejected the proposal, which obliged Bonaparte to offer his services to the French, and this was the rise of Bonaparte's fortunes. I had often heard that Bonaparte had offered his services to the English, and been rejected, but I hardly gave credit to it till I learned it from Admiral Crosby himself."

As this is a fact not generally known, we may be cautious in giving credence to it. If it be true, it is another illustration of the uncertainty of human affairs and of the justice of Pope's remark, "What mighty contests rise from trivial things."

But Providence designed him for a widely different purpose: he was to become the foe, not the servant of England. His first step to power was in the blood of the French people, when, on the 5th October, 1795, he defeated the attack of the sections on the convention. On that occasion his artillery remorselessly swept the streets and the bridges, and the corpses of 8,000 Frenchmen attested how well he had done his work that day. But it was supplemented, on his accession to the post of First Consul of the republic, by the labors of his "special tribunals" for the suppression of the disaffected. Having suppressed the Directory by military force (9th November, 1799), and assumed the consulate, he set these tribunals in operation, and in five months they condemned 724 persons to death.† These were the *coups d'état* by which he arose to the imperial throne. So, on the night of the 2d December, 1851, Louis Napoleon, elected president of the republic the previous December, seized the leading members of the Assembly in their beds and sent them, some into exile, some into prison, and caused hundreds of persons to be shot

* 1794–6 † *Moniteur* of November 24, 1801.

down in the streets of Paris. And by this *coup d'état* he also rose to the imperial throne.

Both were unfaithful to their oaths to observe the existing constitution. But it may be contended that this was owing to the force of circumstances rather than to the ambition and perfidy of the men. That this was the case with Napoleon III. is pretty clear. The assembly, headed by General Changarnier, who was anxious to be dictator, were at open war with the president, and it was simply a question as to which should depose the other. Louis Napoleon was the first to act, and he made good his position by removing his antagonists out of the way; and in so doing he was sustained by the French people, who at once re-elected him president, and subsequently made him emperor. But no such pressing necessity urged on the First Consul. Let him, however, speak for himself:

"It is certain," said Napoleon, "that the Tribunate was absolutely useless; and it cost nearly half a million. *I therefore suppressed it.* I was well aware that an outcry would be raised against the violation of the law. *But I was strong.* I possessed the full confidence of the people, and I considered myself a reformer. This, at least, is certain, that I did all for the best."*

In like manner, he found his colleagues, Cambacérès and Le Brun, in his way; so he "reformed" them out of it, dropped the title of consul, and adopted that of emperor, and all because "he was strong," and therefore he assumed to be the absolute judge of right and wrong. But, in truth, his popularity was then so great that he could have done anything with the people.

The following extract from the conversations recorded by Las Casas† will fully illustrate Napoleon's ambition and views. Speaking of the United States, he said:

"When I acquired the supreme direction of affairs, it was wished that I might become a Washington. Words cost nothing; and, no doubt, those who were so ready to express the wish did so without any

* Las Casas, vol. 1, p. 185. † Vol. 1, p. 244.

knowledge of times, places, persons, or things. Had I been in America, I would willingly have been a Washington; and I should have had little merit in so being, for I do not see how I could reasonably have acted otherwise. But had Washington been in France, exposed to discord from within and invasion from without, I would have defied him to have been what he was in America, or, if he had attempted it, he would have been but a simpleton, and would only have prolonged the existence of evil. For my own part, I could only have been *a crowned Washington.* It was only in a congress of kings, in the midst of kings, yielding or subdued, that I could become so. Then, and then only, I could successfully display Washington's moderation, disinterestedness, and wisdom. I could not reasonably do this but by means of the *universal dictatorship.* To this I aspired."

The reader will duly appreciate the modesty of the foregoing language. Here is a man leading a notoriously dissolute life, and unscrupulously trampling down the rights of the French people, taking it for granted that he could easily be a Washington (*i. e.*, a model of purity and patriotism) if it suited his purpose, but that it would not do unless he acquired universal dictatorship! Of such "vaulting ambition as o'erleaps itself" as this of the first Napoleon we may acquit the third, mainly because he had not the ability to conceive it. Judging from the character of the man, his indolence, irresolution, habitual difficulty in making up his mind, and his sensual and luxurious tastes, we should say that he aimed at the imperial throne chiefly because the possession of it would enable him to gratify his propensities on a grand scale; but, as France held a commanding position in Europe, his being at her head would of itself give him a similar position, and thus his ambition would be gratified without calling for any other abilities than those which would enable him to gain the throne and keep possession of it.

Louis Napoleon owed his success, in the first instance, to the *prestige* of the name of Bonaparte, bequeathed by his illustrious uncle—a name which has, until recently, acted as a magic spell upon Frenchmen; and, in the second, to the zealous services of a set of able adventurers, some of whom had shared his exile. There was Walewski, reputed to be a son of

the first Napoleon by a Polish lady; there were De Morny Maupas, and Fialin (who assumed the name of De Persigny), and Mocquard; there were soldiers like St. Arnaud, Magnan, Forey, and Fleury, who were ready to do anything for employment and promotion; and there were also Corsicans, like Pietri and Abbatucci, who were Bonapartists by affinity, as their fathers had been before them. They were all men of ability, and it was they who planned and acted for Louis Napoleon, he being, in fact, little better than their puppet. It was Fleury who planned, and St. Arnaud who carried out, the *coup d'état* of the 2d December, 1851; and it has even been asserted that Louis Napoleon at the last moment shrank from attempting it, but that Fleury threatened him with death if he failed to sustain the conspirators.* He sat near a fire in an innermost recess of the Tuileries, moody and silent, during the whole of that memorable day and night, listening nervously to the volleys of musketry which rang through the neighborhood. In this he certainly did not resemble his uncle, who, on such an emergency, would not only have planned the entire affair, but have personally superintended its execution.

Napoleon I. brooked no divided authority. His associate consuls had only nominal power. His ministers and marshals were mere tools in his hands. His genius inspired them, and when he fell they fell with him. But Napoleon III. suffered himself to be swayed by those around him. At the beginning of his reign he was so implicated in the schemes of Walewski, De Morny, and De Persigny, that he could not shake them off, nor did he dare to offend them. He was in their power, and his policy, both foreign and domestic, was dictated by them. But they died off, one after the other, and he then fell under the influence of the empress and of a set of worthless speculators. Profuse expenditure, boundless extravagance, and general licentiousness became the order of the day, and the empire rapidly decayed. The true character of Napoleon III. began to reveal itself, and the man who, in the hands of

* Kinglake, *Crimean War*, vol. 1, chap. xiv.

Walewski and his associates, had filled Europe with wonder and terror as a veritable "nephew of his uncle," was found to be but an ordinary mortal after all. Certain it is that when they died his power began to decline. He had nothing to rely upon but the army; and at the opening of 1870, he found his popularity gone, himself lampooned, caricatured, insulted, and despised, his health failing, his household embittered and the nation on the verge of insurrection. Under these circumstances, nothing but a successful war could have saved him. He tried his hand at it and failed. We are by no means sure he was sorry for his failure. Feeling his growing incompetence to contend with the foes rising up everywhere against him, his bodily health broken, and success against the Prussians hopeless, his surrender at once relieved him of all difficulty and danger, and he obtained repose in his humiliation.

He died in exile, like his uncle; but the comparison may stop there. The third Napoleon was welcomed in England, where he was always popular. A victim to the brutality of the British ministry, the first Napoleon passed the remainder of his days on a barren island, giving vent to a series of utterances, displaying for the most part the profoundest wisdom, based on a thorough knowledge of men and books, which utterances will be of value while the world lasts. We have yet to learn that Napoleon III. varied his occupations at Wilhelmshöhe and Chiselhurst with any such philosophizing, or uttered a word that is worth remembering. His "Life of Cæsar" throws no new light on history.* His "Idées Napoleoniennes" were borrowed from his uncle. Much of the merit of the *Code Napoléon* is due to the first Napoleon; it

* "Louis Napoléon n'avait absolument rien compris à ce merveilleux génie de César, et à l'action profonde qu'il exerça sur les destinées du monde. Cette grande figure, du plus celébre insurgé de l'histoire, n'inspira rien au chroniquer impérial. Il crut qu'ecrire l'histoire de Cesar consistait à suivre plus ou moins exactement le pas du géant sur le carte du mond, et à rectifier l'emplacement d'un camp au le nom d'une bourgade, enterrée sous les débris des siécles. Quant à une pensée politique, à une appréciation pyschologique ou historique, il en trouva une seule, laquelle est une hallucination inepte." —*Le Dernier des Napoléon*, p. 53.

emanated from him and was greatly improved by his wise suggestions. If his bulletins had only been true statements of facts some of them would have served for models of historical writing. Unfortunately, those already published tarnish his reputation for veracity, and show him to have been little better than an extortioner and a plunderer. *De mortuis nil nisi* VERUM is our motto in regard to kings and emperors; we discard the *bonum* because there could be no history worth reading were such a rule to be observed.

Both uncle and nephew sought to strengthen their position by marriage with a foreign princess. Napoleon I. obtained Maria Louisa by the bayonet, the Austrian emperor having a prudent dread of him, and wishing to make a friend. Napoleon III. could not induce any European princess to listen to him. Thereupon, like the fox in the fable, he explained to the French nation that the choice of the people, the head of a democratic empire, ought to disdain princesses, and that he had selected for his wife a Spanish lady, Eugenia de Montijo. We should be inclined to award Napoleon III. the palm over his uncle in the matter of marriage, were it not for the fact that it was not until *after* he had found he could not have a princess that he resolved to take a wife from motives of affection. At all events he did not divorce a wife who loved him to marry a woman who did not, and that from mere motives of policy. This was one of the first Napoleon's greatest crimes as well as blunders, and he soon regretted having married her.* The results of the two marriages were what might have been predicted. When misfortune overtook Napoleon I., Maria Louisa forsook him, and never expressed a wish to share his exile with him.† When a similar calamity befell Napoleon III., Eugenie clung to him and consoled his dying hours. It is a remarkable coincidence that the sole issue of each marriage was a son.

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* "And she, proud Austria's mournful flower,
Thy still imperial bride,
How bears her breast the torturing hour?
Still clings she to thy side?"—*Byron.*

† Las Casas, *Letters*, vol. 4.

Our principal object being to point out wherein the two Napoleons resembled or differed from each other as regards character, intellect, and career, we shall abstain from all personalities which do not bear thereon. Probably no two men have ever been so heartily maligned, abused, and condemned as "Napoléon le grand," and "Napoléon le petit"; but both of them, outwardly, seemed to be indifferent to it, and seldom visited the guilty parties with punishment, except when serious political disturbances might be feared. Nevertheless Napoleon I. once remarked "if caricatures sometimes avenge misfortune *they form a continual annoyance to power*, and how many have been made upon me! I think I have had my share of them."* There was one form of caricature that greatly annoyed the late emperor. His legs were short in proportion to his body, so that when sitting, or on horseback, he might have been taken for a much taller man than he really was; so the delight of the Parisian wags was to represent him with a small body and long, stout legs, immense nose, and straight moustache a foot long, and pointed at both ends, or else standing in such an attitude as to make one leg appear much longer than the other. He at length gave orders to the police to suppress all caricatures wherein he was represented as deformed, or in a ludicrous attitude. It is understood that Queen Victoria discontinued taking in *Punch* because one of its caricatures represented her dancing "the Highland fling" with Lord Aberdeen, Sir Robert Peel, and Sir James Graham, her three principal ministers.

Both uncle and nephew were false to their promises to Italy. At the outset of Napoleon's brilliant career in that peninsula, when victory after victory crowned his movements against the Austrians, and the delighted Italians were flocking to his standard by thousands, he talked loudly of conferring liberty on the invaded country, of equality and fraternity, and of the deposing of the tyrants—native and foreign—who shared the peninsula between them. He even went so far as to found the Cisalpine, the Transpadane, and the Ligurian republics.

* Las Casas, vol. i., p. 201.

He promised ultimate unification to Italy, but when he had overrun that unhappy land he annexed it to his empire. He made his stepson, Eugene Beauharnais, viceroy of it, and his brother, Joseph, king of Naples. The latter, having been subsequently made king of Spain, was succeeded by his brother-in-law, Murat. Rome and the States of the Church were seized and made a portion of the kingdom of Italy, and the Pope, Pius VII., was removed to France in spite of his vehement expostulations and implorings. The upshot of all this violence and desperate attempt at "universal dictatorship" was a revulsion in the feelings of the Italians, and, indeed, of all Europe, which re-established the old governments in greater force than ever, and it has cost Italy many years of war and suffering to regain her liberties.

Let us see how Italy fared with the French republic of 1848, the president, Louis Napoleon, and the second empire. The downfall of Louis Phillippe, in the revolution of 1848, was the signal for a general uprising of the European people against their rulers. The flame spread from France all over Germany and Italy. Hungary tried to throw off the yoke of Austria—so did the Italians in Lombardy, Venice, and Bologne. The Sicilians revolted against the Bourbons of Naples; and Garibaldi, Mazzini, and Saffi established a republic in Rome. When the patriots appealed to the newly constituted French republic for aid, General Cavaignac replied that, though he was favorable to a federation of the different states of Italy, he could not assist them in the formation of a united and independent nation. On his accession to the presidency, Louis Napoleon adopted the same policy. He, moreover, recognized the traditional policy of France, with regard to the papacy, and sent an army to Rome to suppress the republic and reinstate the Pope. This was accomplished after a month's siege of the city. He also suffered Charles Albert, of Sardinia, to be overpowered by the Austrians, and, before the close of 1849, he had the satisfaction of seeing Italy rendered once more a "geographical expression." Lombardy and Venetia were restored to Austria; Sicily to Naples; the Romagna to the Papacy; and the Duchies to their former

rulers. In despair and disgust the Italians bitterly denounced Louis Napoleon, and reproached him with having violated the oath which he had taken to the Carbonari years before, when he and his brother Charles joined the conspirators at Ancona. They threatened him with the fate of his brother, who had fallen beneath a Carbonaro dagger because he, too, had refused to act against the Pope. From that time Louis Napoleon was in hourly dread of assassination, but the ceaseless vigilance of his friend, Pietri, whom he had made Minister of Police, preserved him from many attempts—nevertheless Pianori and Orsini nearly succeeded in taking his life. The Crimean war once more brought Italy prominently before Europe. The astute Sardinian minister, Cavour, saw in it an opportunity for carrying out his long cherished schemes for liberating Lombardy and Venitia, and, perhaps, more. He joined the alliance against Russia, and sent a contingent of troops to the Crimea. This gave him a right to be present when the negotiations for peace were begun, and he took that opportunity to press the claims of Italy to independence. He understood Napoleon, pointed out to him that his life would never be safe from an Italian knife if he did not assist in expelling the Austrians from Italy, and offered him Nice and Savoy as the price of his aid.

The bait took. Fear and ambition brought about what nothing else could, the presence of a French army in Italy. Then, in 1859, followed the campaign of Magenta and Solferino, the sudden truce of Villafranca, and the treaty of Zurich. Italy was again bitterly disappointed. Louis Napoleon had entered Piedmont at the head of a powerful army, proclaiming his intention of making Italy free "from the Alps to the Adriatic." This may have been an artfully contrived expression, since it might be construed to mean only that portion of the peninsula lying between the Rhœtian or the Julian Alps and the northern shore of the Adriatic. But the Italian patriots understood it to mean the whole of Italy, and when, after six weeks fighting, the war was suddenly brought to a close, and all that was achieved was the annexation of Lombardy to Piedmont—not even Venitia having been

recovered—their indignation was excessive. Garibaldi roundly denounced the cession of Nice, his native city, and cursed the hand that "had made him a Frenchman." He was not to be restrained. With a few intrepid spirits he invaded Sicily and liberated the island from the hated king of Naples. He followed up his marvellous success by success still more marvellous, and drove Francis II. out of Naples. The victorious chieftain complacently handed the kingdom of the two Sicilies over to King Victor Emanuel, of Sardinia, who as complacently accepted it; and the duchies and the Romagna having risen and expelled their Bourbon rulers, and invited Victor Emanuel to take their place, he did so, and proclaimed himself King of Italy, to the astonishment of Europe and the indignation of Napoleon III., whose policy had all along been to prevent the unification of Italy. He vented his spleen by opposing obstacles to General Cialdini in his siege of Gaëta, where the ex king and queen of Naples had entrenched themselves; and by preventing the Italian fleet from blockading the harbor, he prolonged the siege until famine caused the besieged to surrender. In vain did Victor Emanuel remonstrate against the unjustifiable interference on the part of Napoleon. The insulting reply he got, was, that the emperor desired thus to show his sympathy with the young king and queen, sympathy for Francis II.!! and none for liberated Italy!!

All this time the emperor had maintained a French garrison in Rome, which city was now all that was left to the Church of her temporal possessions. He utterly disregarded the wishes of the Italians, who looked upon Rome as their rightful capital. Garibaldi made some heroic attempts to repel the French by force, but failed. The campaign of Sadowa and the alliance between Italy and Prussia, in 1866, liberated Venetia from the Austrians, and there now remained only "the Eternal City" wanting to complete the map of United Italy. It was relinquished at last by Napoleon III., and thus the finishing stroke was put to his Italian policy. What had he gained by it? The hatred and contempt of the Italians. He might have liberated Italy from north to south,

but he preferred to keep her divided—yet he went far enough to make enemies of those French statesmen who held to the old traditional policy of a disunited Italy. When the Prussians were advancing on Paris he applied to Italy for help, but was refused it, because Italy was then an ally of Prussia! and she was busy making tunnels through the Alps, and railways to her seaports, in order to draw away to her own ports the commerce of Marseilles!

We have not said anything about Napoleon the Third's military exploits in Italy, for they did not amount to anything. Though he had an army three times as numerous as that with which his uncle won the battles of Montenotte, Mondovi, Millesimo, Lodi, and Arcola, he barely made head against the Austrians. His marshals, Niel and McMahon, did all the work, but his was not the master mind that directed them. He was the cause of nearly losing the day at Magenta, and as for Solferino, it was practically a drawn battle. A decisive victory was not what he wanted. It is said that he had received an intimation from Prussia that if he pressed the war any further Germany would come to the assistance of Austria, and hence the abrupt termination of the contest. This may have been so—indeed, Napoleon intimated as much—but we are inclined to think, as we have already said, that the unification of Italy was no part of his plan, and he was glad of an excuse for giving up the struggle.

It is a characteristic common to the two emperors that all their wars were of their own seeking. The revolution of 1789 having roused the fears of Europe, a coalition of the powers against France was talked of; but the republican government took the initiative (after the silly parade of the Duke of Brunswick at Valmoy and Jemappes), and French armies entered Germany and the Netherlands. Napoleon was merely an instrument in that first war, but it raised him to the very highest distinction, and made him practically master of the Directory and of France. The victor of Lodi dictated terms to the vanquished, and the Directory had to acquiesce therein. From that time to 1814, he controlled the destinies of France, so far as any human being can be said to "control

destiny." He planned the invasion of Egypt, and thus wantonly invaded the Turkish dominions. After the peace of Amiens he sought pretexts for renewing war with England, and threatened her with invasion. Foiled in that, he suddenly fell upon Austria, then Prussia, then Russia. Austerlitz, Jena, and Friedland made him fancy himself master of Europe. After the peace of Tilsit he wantonly invaded Spain and Portugal, and annexed them to his empire. Then he renewed war with Austria, and, having cleared the way to Russia, he set out on his fatal march to Moscow. He had foes all round him now, and fighting his way back with difficulty to France, he arrived in Paris to find the armies of indignant Europe marching upon that city. His fate was at hand, but he met it bravely and was overpowered. An exile in Elba, he still had faith in his "destiny," and escaped to France to receive his crowning defeat at Waterloo. He left France in the occupation of foreign soldiers.

Louis Napoleon began his military career by making war upon France in two attempts to revive the prestige of the name of Bonaparte—one at Strasbourg, the other at Bologne. He became an object of ridicule, as well as a prisoner at Ham. But fortune favored him; he escaped, and, after the revolution of 1848, was elected a member of the assembly, and subsequently president. He, like his uncle, was a product of the revolution, and, by means of the army, seated himself on the imperial throne. We have already alluded to his arresting and imprisoning or exiling a number of his political opponents, and we do it again here to point out that in so doing he only imitated his uncle, who, on becoming provisional consul, immediately banished fifty "anarchists." "That," said Napoleon, "was the first act of my administration."*

Napoleon III. proclaimed an empire of peace, but before three months elapsed he joined England in an alliance against Russia. He announced his determination "to tear up the treaties of 1815." The first step was war with Russia: it was popular and so engaged public attention that he had time to

* Las Casas.

consolidate his empire. Once more imitating his uncle, he created a senate, or upper chamber, of well-paid, pliable adherents, and made his surviving uncle, Jerome Bonaparte, president of it. Pensions and palaces, dotations and decorations, were prodigally bestowed on his relatives, connexions and personal friends and accomplices. The second empire was being carried out on precisely the same plan as the first. The Legion of Honor was revived, and titles of nobility were revived. Fialin became a duke, and Walewski and De Morny counts.

After the Crimean war there was a brief interval of peace in Europe, but France carried on military operations in Anam and against the Chinese. Then, in 1859, the emperor undertook to liberate Italy, with what result we have already seen. This was a purely gratuitous attack on Austria, and it might be contended that he had no right to make it. But he did, and so the treaties of 1815, in which Austria figured, were torn up. The prestige of France stood high: the French army, believing itself to be the best in the world, panted for more "glory," and looked to the man they were maintaining on the throne for it. He cast his eyes around the horizon, and saw troubles arising among ourselves; these resulted in open war between the Northern and the Southern States. Here was a grand opportunity for playing a part. He proposed to himself the dismemberment of our Union, but he wanted the nerve to attempt it alone. He, therefore, invited England to join him in the enterprise, but she declined the honor as rather perilous. Twice he essayed to persuade her, but failed. It was annoying that so glorious an opportunity of breaking up a rising empire should be lost; but he bethought him of Mexico, as his uncle had done of Spain, and he determined to effect by military force the "pacification" of that so-called republic. The non-payment of the claims of certain Frenchmen against the Mexican government sufficed for a pretext; but again the emperor preferred having allies in the affair, in order to conceal the real nature of his designs. England and Spain were invited to join in the attempt to make Mexico pay her debts. At first they concurred; but as

soon as they discovered that that was merely a pretext, and that the emperor's real design was the conquest of the country, they renounced the affair altogether. The invasion which followed was as wanton as that of Spain in 1807; but it might extend the influence of France and help the Southern States; and, by an afterthought, Napoleon perceived it might be made available to regain the friendship of Austria by offering the conquered country to one of her archdukes, in case he (Napoleon) should find it difficult or dangerous for him to annex it to France.

The story of this disastrous enterprise is too fresh in everybody's memory to need recapitulation. The first Napoleon would have conducted it in person; his nephew confided it to Bazaine and Forey. The archduke Maximilian was saluted emperor of Mexico. But in the meantime the civil war in the United States had ceased, and the Federal government was in a position to intervene. It threatened to expel the French from Mexico, and even sent an ultimatum to the emperor requiring him to withdraw his army by a given day.* There was no alternative but to comply. He did not dare to venture on a war with this country, and moreover a strong republican party was growing up in France, which he had to watch narrowly. He sought to evade the humiliation by asking Maximilian to resign, and he withdrew his support from him. Bazaine returned to France, having married a very rich relative of Juarez, and poor Maximilian expiated his ambition and folly at Queretaro.

We cannot refrain from adding the last sad scene of this miserable affair. It is the last interview of the unfortunate Carlotta, the wife of Maximilian, with Napoleon III. She has come in all haste from Mexico, by desire of her husband, to explain to him the situation there and implore assistance. She arrives in Paris and puts up at the Grand Hotel, but no notice is taken of her. She hastens to St. Cloud, throws herself at the emperor's feet, and exhausts all her arguments and supplications. He remains sombre and icy, and promises

* *Le Dernier des Napoléons*, p. 194.

an answer to-morrow. On the morrow he goes to the Grand Hotel, and coldly announces to the unhappy exile that circumstances have changed, and he can do nothing more for Mexico. Carlotta, terrified at the disastrous consequences of this desertion, wildly exclaims: "But this is our death-warrant!" and making a last desperate appeal to the past and the future, she prays and implores; but he rises to take his leave, and says in an unsympathizing tone: "It is useless to persist, madame; not another man, not another franc." It was too much. The courage and brain of the poor wife gave way simultaneously. Despair and madness seized her. She stood up before the emperor, her face on fire, her eyes flashing, and cried out in a heated voice: "Ah! then I was not deceived. I know you now, you executioner of my family! Yes, take your revenge upon the grand-daughter of Louis Phillippe—of him who snatched you from poverty and the scaffold!" The emperor quitted the room, but, like one of the avenging Eumenides, the princess followed him down the staircase, shrieking out these words: "Perhaps you think, by means of your police, to force from me your letters and your promises; but you are mistaken;—they are in a safe place. Be off! and may God curse you as he did Cain!" She then descended into the court-yard, called for a carriage, cast herself wildly into it, her hair streaming loose, her eyes wandering, her lips trembling. She murmured "air! air!" and fell fainting on the cushions. She was insane! They sent her to Rome, to the Vatican. It is said that Napoleon I., in his dreams at St. Helena, used to see the spectre of the Duke d'Enghien. It would not be surprising if Napoleon III. in his visions saw the murdered Maximilian and his poor lunatic wife!*

The author of that searching work, *Le Dernier des Napoléon* (supposed by some to be Count Beust, late prime minister of Austria, but who is more probably some influential partisan of the Count de Chambord), attributes the Mexican war to the empress Eugenie;† while the Liberal opposition in the press and the Corps Legislatif attributed it to a desire for plunder,

* *Le Dernier des Napoléon*, p. 40. † See Chap. 11.

making it a mere question of dollars and of speculation in mines or land. We do not agree with either view, though it is possible that the empress, backed by the Church party, was anxious for the downfall of Juarez and his party, who had deprived the Church in Mexico of much of its wealth, and therefore she entered heartily into the scheme. It is also probable that, had the expedition succeeded, a large indemnity would have found its way into the imperial treasury, with, perhaps, a naval station on the Atlantic seaboard and another on the Pacific. But the real design was the emperor's own. His grand idea, as formulated in his letter to General Forey, was to resuscitate in America the influence of the Latin race, and to put a stop to the ambitious aspirations of the United States, by establishing a Franco-Spanish empire in the centre of the continent as a barrier to their further progress south, or, failing that, Mexico might come to terms and accept a French protectorate. "Si, au contraire," says the emperor, "le Mexique conserve son indépendance et maintient l'integrité de son territaire, si un gouvernement stable s'y constitue avec l'assistance de la France, nous aurons rendue à la race Latine de l' autre côté de l'ocean sa force et son prestige." Here we have the development of one of the Napoleonic ideas, that as the ruler of France he was at the head of the Latin race.

We have said that the invasion of Mexico was as wanton as that of Spain by the first Napoleon; we may add that it was as fatal to its projector. It did not, it is true, cost France 300,000 of her best troops, as the Spanish war did, but it jeopardized her relations with this country, and destroyed Napoleon the Third's prestige, both for success and for astuteness; it gave a fresh weapon to his enemies, the republicans and the monarchists, to use against him, and they were not slow to avail themselves of it. To regain his waning popularity he had recourse to his uncle's expedient of surrounding himself with a brilliant court, and making Paris a centre of attraction for foreigners. By this means he would gratify his own taste for splendor and luxury, and that of the empress, and at the same time secure the affection of the Parisians.

The Tuileries offered ostentatious hospitality to foreigners,

and Frenchmen noticed with surprise that the court had now, so to speak, scarcely anything French about it. Natives were left in the background, and foreigners were overwhelmed with attentions. The emperor surrounded himself with Englishmen and Germans; the empress patronized Americans, Spaniards, and Italians. Indeed, at one time, viz., while in Egypt and at the opening of the Suez Canal, the empress displayed marked want of courtesy, and even rudeness, to Frenchmen, although M. de Lesseps, the engineer of the canal, was her own cousin. The prodigality of the court of the Tuileries became the talk of Europe, and the splendor of the imperial receptions attracted visitors from all quarters of the globe. We may say with the Prince of Morocco—

> "From the four corners of the earth they come . . .
> The Hyrcanian deserts, and the vasty wilds
> Of wild Arabia, are as thoroughfares now
> For princes to come view fair *Eugenie*:
> The wat'ry kingdom, whose ambitious head
> Spits in the face of heaven, is no bar
> To stop the foreign spirits, but they come,
> As o'er a brook, to see fair *Eugenie*."

Then a magnificent *Palais d'Industrie* arose on the Champ de Mars, and millions of francs were expended to make this "Exposition Universelle" a success. In 1867 Paris literally swarmed with foreigners of all ranks, from royalty to artisanship. Money circulated freely in Paris, and the Parisians were delighted; but the rest of France groaned under the additional heavy taxation necessary to maintain all this extravagance, and growled ominously at the imperial *régime*. Béranger, in one of his most popular lyrics, makes the grand-children of an old soldier ask questions about the great Napoleon: "Parlez nous de *lui*, grandpère; parlez nous de *lui*." But these same grand-children, now grown up under the third Napoleon, finding the comparison between the two unpleasant, now began to say of the latter—"ne parlez plus de lui!"

The most flagitious peculation was practiced by officials of every grade. Enormous speculations were entered into by all classes, even by the imperial family, in the hope of obtaining

means for keeping pace with the exorbitant demands of fashion, with its corresponding licentiousness; and ladies of the highest rank might be seen imitating the dress and manners of the *demi monde*. Duels, arising out of intrigues, were fought daily, and suicides, from losses at the gaming-table, were equally common. Baccarat was an invariable concomitant of every fashionable party, and the night usually wound up with it. The free use of absinthe and other deleterious stimulants added to the general excitement and dissipation. Paris became demoralized, one fatal symptom of which was the immoral and indecent nature of the pieces produced at the theatres; no play would go down unless highly seasoned with intrigue and adultery. It is no secret that the emperor himself indulged in both. Among the scandalous papers found in the Tuileries, after the flight of the empress, and subsequently published by order of the provisional government, are two from Mdlle. Marguerite Bellanger to the emperor, printed in fac-simile of her handwriting, which fully reveal the nature of his intimacy with her.* This curious volume is well worth the attention of the historian. It reveals the rottenness of the second empire, just as the recently published state papers of the first empire reveal the cruelty, mendacity, and selfishness of the first Napoleon.

We approach the catastrophe. Corruption prevailed in every branch of the public service, especially in the military and naval departments. The army made a magnificent display at reviews and *upon paper*, and France was gratified at perceiving herself regarded as the leading military power in Europe. This was the fatal delusion into which even the emperor fell, and it was the cause of the Prussian war. France was now in a position to avenge herself for Leipsic and Waterloo, and to extricate herself from the false position which the Prussian victory over Austria, at Sadowa, had placed her in. The emperor at first tried to restore the equilibrium by diplomacy; he sought to acquire Luxemburg secretly from the

* *Papiers et Correspondance de la Famille Impériale*, vol. 1, supplement.

king of the Netherlands, but Bismarck proved too wily for him, and, after leading him on so as hopelessly to commit himself in the affair, turned round and published the correspondence. The emperor's position was humiliating; he thirsted for revenge, and Bismarck, thoroughly well informed of the condition of the French army, and of its unfitness to take the field, got up the Hohenzollern candidature for the Spanish throne. The bait took: the emperor, assured by his ministers that everything was ready, declared war "with a light heart." His subsequent delays, vacillation, and evident want of administrative ability precipitated the catastrophe, and, within seven weeks from the declaration of war, France was stricken down, he himself was a prisoner of war, and Eugenie and her son exiles. The second empire terminated as the first did, in a crushing military reverse and the occupation of France by foreign troops.

The parallel, however, is not exactly just. In 1815 the Allies disarmed France and occupied the whole of the country, but without extorting from it any indemnity beyond the maintenance of 150,000 foreign troops for four years. But the German emperor exacted from her an indemnity of 5,000,000,000 francs, a sum unheard of for such a purpose in modern times, and he occupied only a portion of her territory. Paris, however, underwent in 1871 the humiliation of 1615, in seeing foreign, hostile troops defiling along the Champs Elysées. The parallelism between the first and second empires ceases with Sedan. The Bourbons reascended the throne of their ancestors in 1815, after the fall of Paris; but in 1870 the fall of the empire was succeeded by a republic (so-called), and what is yet to come no one can foresee.

Notwithstanding the disasters and the demoralization of the second empire, France has in reality come out of it better than she did out of the first. The immorality of the latter was as great as that of the former. There was scarcely a public man or woman of the great Napoleon's court at whom the finger of scandal did not point. Even the much-beloved and admired empress Josephine was not an exception. In

a volume of poems published before her divorce; a poem, relating to her, ends with these two lines:

> " Puis, suivant du hasard l'impulsion propice,
> Passa de lit en lit au rang d'Imperatrice."

Another poem relative to the Bonaparte family makes the emperor utter the following quatrian respecting his brother Louis, whom he had compelled to marry Josephine's daughter, Hortense Beauharnais:

> " Son épouse d'ailleurs, *qui fut d'abord la mienne.*
> Pourra quoi qu'il arrive et quoi qu'il entreprenne,
> L'aider de sa sagesse et lui servir d'appui,
> *Car si je la formais si bien*, ce fut pour lui."

The late emperor was the son of Queen Hortense; she had two other sons, older than he, by her husband, and she adopted a son of Count Arese. In her will she recommended Louis Napoleon to treat this youth as a brother. The author of *Le Dernier des Napoléon* seeks to make scandal out of this, but as the young Arese was the same age as Louis Napoleon, there seems to be but little ground for it. Hortense had enough said about her without this. But it is only fair to remark that the age itself was a licentious one. There was not a court in Europe wherein licentiousness was not openly practised at that time; the sons of George III., especially the Prince of Wales and the Duke of York, were sad examples of debauchees; and as for the queen of Spain, the wife of Charles IV., who does not name her with disgust and "execrate Godey?" and there was Catherine II. of Russia, and the German princes generally.

In this respect, then, more allowance can be made for the first empire than for the second; for the latter had before it the excellent example of Queen Victoria, of Leopold I. of Belgium, of the royal families of Prussia, Austria and Sweden, and, latterly, of Russia. And it is much to be regretted that the emperor of the French should have descended to such associates as Miss Howard and Mdlle. Bellanger, while his beautiful empress was adorning the Tuileries; but such is human weakness at times: it prefers "ways that are dark and tricks that are vain" to the straightforward path, which it

finds irksome. There remain a few words to be said about the internal policy of the two empires.

The detestable system of *espionage* prevailed in both. There were spies everywhere. The waiters at the hotels, the drivers of public conveyances, salesmen in stores, boatmen, scavengers, clerks, persons of all ranks and classes, nay, even ladies of high station, were secret agents of the police. No one was safe from denunciation as an enemy of the government. Arrests of suspected or known hostile parties were frequently made on trifling pretexts, and the arrested were often kept immured without communication with their friends until it pleased the minister of police to release them or bring them to trial. It is generally believed that many of the so-called attempts at assassination of the emperor were got up by the police in order to afford the government a pretext for maintaining a large military force, or to get rid of some objectionable individuals. The famous Pichegru and Georges Cadandals affair, and that of the Duke d'Enghien, in 1804, are said to have been of this class, and some of the *émeutes* in Paris under the second empire were the same. The late emperor professed to be the friend of the working classes; he always subscribed handsomely to institutions designed to benefit them, and he encouraged them to form associations for their own benefit. In fact, under his auspices the International Association was formed, but as soon as he found out the extent of its schemes he caused the leaders to be accused of combining for political purposes, and expelled the society from France.

So with the numerous strikes which of late years have agitated France, many of which were at first encouraged by the emperor, but were subsequently put down by military force. Rightly or wrongly, the emperor has the credit of having acted on the whole with duplicity to the working classes. He has, however, the merit of having inaugurated the system of plebiscites, and of thereby establishing universal suffrage in France; and although, doubtless, these plebiscites were in a great measure adroitly manipulated to his advantage, owing to the ignorance and credulity of the mass of the

people, yet the principle of universal suffrage remains. It had previously been exercised only for a short period at the fitful intervals of revolution.

The great Napoleon was the first ruler of France who fully and fairly put in practice the doctrine of "the right man in the right place." He employed men of all classes, and put them in the places they were best adapted for. In this way obscure men like Junot and Augereau rose to be field-marshals and dukes of the empire. He would not employ any one merely on account of his wealth or his rank, as has been almost the strict rule with the old monarchies of Europe. Merit of any sort had but to make itself known to Napoleon to be rewarded and put in the way of utilizing itself. This was one of the causes which produced the power and brilliancy of his reign. And the late emperor followed his example in many cases, but, being anxious to propitiate the old nobility and the legitimists, he occasionally employed those who could be induced to swerve from their principles. And he adopted the same policy with the ultra-revolutionists—successfully, too, as in the case of Emile Olivier, whom he subsequently made premier. The first Napoleon, however, adopted a policy which his less astute successor only occasionally and feebly imitated. "I never made overtures," said Napoleon at St. Helena, "to leaders in order to gain over parties. On the contrary I approached the mass of the parties, that I might be in a situation to despise their leaders." He should, however, have added that these leaders were very carefully watched and sometimes entrapped by his police.

There are other points on which we might dilate, but want of space warns us to close our remarks. The resemblance between the two empires is remarkable. The second may be considered a reflex of the first, but the brilliancy of the latter is to that of the former as the abilities and genius of the first Napoleon are to those of the third. Both of these distinguished men contributed largely to the promotion of the fine arts, and to great public works. They beautified Paris, and the third Napoleon may be said to have almost rebuilt that city. And they have both left a permanent impress on the nation.

ART. II.—1. *Dissertation de Distintione Mentis a Corpore* (*Dissertation on the Difference between Mind and Body*). HERM. BOERHAVE.

2. *Disquisitions relating to Matter and Spirit.* By JOSEPH PRIESTLY. London. 1777.

3. *Untersuchungen über das Wesen und Wirken der Menschlichen Seele, etc.* (*Researches on the Nature and Operations of the Human Soul*). CHRISTIAN WEIS. Leipzig. 1813.

4. *De Senectute. De Amicitia.* (*Old Age. Friendship*). CICERO.

5. *Principles of Psychology.* By HERBERT SPENCER.

No investigation has so thoroughly engrossed and entirely baffled the human mind as the inquiry into the nature of the soul. And the old Delphic admonition "γνωθὲ σεαυτον" is as pertinent to-day as ever. There is, at the present time, however, a tendency to abandon the inquiry into the constitution of the soul in many intellectual quarters, arising from the preponderance of interest felt in material development and in the science of external things. There is a disposition among many individuals of the highest culture to give up as futile a search hitherto attended with failure, and hereafter likely to be attended only by indifferent and equivocal success. The study of the constitution of mind is supplanted by the study of the development of mind, even among metaphysicians. Self-culture takes the place of self-knowledge; and the individual finds greater pleasure and profit in knowing *how* we are than *what* we are. The human mind is occupied chiefly with the generalization of *effects* and the discovery of the laws that govern the phenomena of the universe.

There is, nevertheless, a latent desire among all classes to understand more of the nature and constitution of the soul.

Each of the religious classes accepts the revelations of its particular religion as proof enough of the existence of a soul independent of the body. The scientific classes are divided in their views. There are those who profess to find no evidence of the existence of the soul as a distinct entity, and who disbelieve in its existence as such; those who are content to remain in perfect doubt; and those who think they have sufficient positive evidence of its independent existence. But it is now quite generally conceded that there are two distinct forces, the one designated physical, the other psychical, whose natures may or may not have something in common.* By the Idealists, the psychical force is supposed to be principal or primary, and the physical force subordinate, or secondary and derivative. Matter is therefore a creation of mind, or an in-

* It must be admitted that modern philosophy has shed no new light on the nature of the soul. By no moderns has the subject been discussed more searchingly or more profoundly than by Plato and Aristotle. Indeed, we may as well acknowledge that none have approached those great thinkers, so far as mere human reasoning is concerned, and we are not now speaking of the dogmas of Christianity as expounded either by the Fathers of the Church or by later theologians and divines. Among the Romans, those who have studied the Greek philosophy most thoroughly, especially as far as it relates to the soul, are Cicero and Seneca. These two philosophers embody in their writings the essence of the different systems received by any considerable portion of the philosophical world up to their time. And what this essence is, is made sufficiently plain in some passages in Cicero's admirable dialogues on Old Age and Friendship. We can only extract a sentence or two, but it is enough. "Nor am I able to agree," says the eloquent Roman philosopher, "with those who have *begun to affirm* that the soul dies with the body, and that all things are destroyed by death. I am more inclined to be of the opinion of those among the ancients *who used to maintain* that the souls of men are divine, and when they leave the body they return to heaven, and those who are the most virtuous and upright have the most speedy entrance."—"Neque assentior iis, qui hæc nuper disserere cœperunt, cum corporibus simul animos interire atque omnia morte deleri. Plus apud me antiquorum auctoritas valet, qui dicebant animos hominum esse divinos, iisque, cum e corpore excississent, reditum in cœlum patere, optimoque et justissimo cuique expeditissimum." *De Amicit.* 3.

If any among the student class still think that the moderns have added anything to the world's stock of knowledge, as to the essential nature of the soul, let them peruse Seneca's *De Beneficiis*, *De Vita Beata*, *De Brevitate Vitæ*, *De Irâ*.

ference of the intellect. With this class the argument in regard to the existence of the soul has no meaning, for to them everything is soul, or the projection of soul. By the Materialists, on the contrary, the physical force is supposed to be principal and primary, and the psychical force subordinate, secondary and derivative. To these, mind is but a manifestation of matter, and there is, as a consequence, nothing existent but matter, and no such thing as soul in the common acceptance of the term. By the Substantialists, physical and psychical forces are supposed to be branches of an underlying substance in which these forces inhere. Matter and mind are, therefore, modifications of an ultimate reality, and soul is as much an entity as body or matter.*

But the universal conception of *force* is as the resident of a medium. From this conception we can never free ourselves. It is a conception grounded in the nature of mind and corresponding to the nature of things. In whatever aspect we view a thing, external or internal, there will always be presented the antithesis (and synthesis) of *force* and *medium*. "There must be a medium for the residence and exercise of every force" is the universal postulate of the human mind, and the resultant proposition of all our experience. If we call this

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* "Hence, though of the two it seems easier to translate so-called matter into so-called spirit, than to translate so-called spirit into so-called matter (which latter is, indeed, wholly impossible), yet no translation can carry us beyond our symbols."—*Principles of Psychology*, vol. i., 2d ed., § 63. By Herbert Spencer.

"See then our predicament. We can think of matter only in terms of mind. We can think of mind only in terms of matter. When we have pushed our explorations of the first to the uttermost limit, we are referred to the second for a final answer; and when we have got the final answer of the second we are referred back to the first for an interpretation of it. We find the value of x in terms of y; then we find the value of y in terms of x; and so on we may continue forever without coming nearer to a solution. The antithesis of subject and object, never to be transcended while consciousness lasts, renders impossible all knowledge of that ultimate reality in which subject and object are united."—*Ibid.*, § 272.

"And this brings us to the true conclusion implied throughout the foregoing pages—the conclusion that it is one and the same ultimate reality which is manifested to us subjectively and objectively."—*Ibid.*, § 273.

medium "matter," then experience proves that there are two heterogenous forces existing in matter and evolving themselves into the external world, physical and psychical force. Thus far human experience has never found either of these forces independent of, or outside of, this medium.* Neither is there any opportunity for the deduction that pure force, whether physical or psychical, could ever exist without a medium. The dissolution of the connection is absolutely inconceivable. If ever experience has taught us that hardness, or roughness, or extension, or any power or force has existed in any material substance, the human mind is so constituted that it cannot think of hardness or roughness, or any physical qualities, as entities separate, in fact, from the bodies in which they appear, or some other bodies. There may be a conversion and locomotion of force, but never a dissolution of it from some medium. Again if ever experience has taught us that love or hate, or reason or any intelligence, or any force existed in a person, the human mind is so constituted that it cannot think of intelligence or feeling, or any psychical force, except as resident and operating in and through some medium, personal or impersonal. We cannot think of soul or mind as force independent, in fact, of some medium of existence or operation.

The question recurs, then, what is the nature of this medium of the soul? Our vocabulary has no word for the medium in which we see all forces manifested, except some such word as "matter" or "substance." And this term matter or substance is applied to a medium than which we know, or can think, of none other. It would be useless to assert that there *is* and *can be* no other medium; but it is safe to say that we have never found and cannot conceive of any other. So, far, then, as we know or can conceive, the medium of physical force was and will be essentially what it is now, with changes and modifications in that force; so far as we know or

* ". . . And we know nothing of cause, save as manifested in existences we class as material—either our own bodies or surrounding things."—*Prin. of Psychology*, § 272.

can conceive, the medium of psychical force was and will be essentially what it is now, with changes and modifications in that force. The inquiry, then, into the nature of the soul is left in this condition: we have discovered and conceded the existence of a physical force susceptible of great modifications, evolutions, uniformities, varieties, producing in the medium in which it resides and operates all the forms of external nature; we have discovered and conceded also another force which we call psychical force susceptible of great modifications and evolutions, and producing all the effects which arise in consciousness and many other unconscious changes which are embodied in beings possessed of vital functions. Under certain conditions of its medium the psychical force acts so as to produce the intelligence, feeling and faculty of a man; under other conditions it acts so as to produce the instinct, passion and general mental state of the lower animals. The sum of this force is supposed to remain the same in amount—in analogy to what has been discovered relative to physical force. All scientific men can understand the immortality of both forces—how they remain the same in amount and are always persistent, simply changing their place, effects, manifestations. The immortality of psychical force, or of the soul, is quite universally conceded, and in fact it is an irresistible conclusion, in some form or other. The question is narrowed down to the continuance of the individuality or personality of the soul. Inasmuch as the physical forces change their places and forms, and *things* themselves lose their identity to an observer, and are destroyed, so it might be inferred that psychical force might change its place and form, and *persons* themselves might lose their identity and individuality and be destroyed, while the force which manifests itself in the person has simply relapsed into an impersonal state, without losing any of its amount or persistence. There would be, then, a simple conversion of force, personality and consciousness being only the result of organism.

To all appearances this is the case when death takes place; and to many scientists the analogical argument here pursued is conclusive. But without commenting upon the soundness

of the argumentation against a personal existence, after death, of the so-called soul, we shall assume that such would be the inference were it not for the intervention of a hypothesis of the nature of the soul, which has occurred to the writer and, we presume, to others, and which we shall denominate the "Material Hypothesis of the Soul." The hypothesis, in brief, is that there is in man a refined subsensible substance in which the psychical force resides, and which is separated from the grosser and sensible portions of the body at death.* The writer does not intend to commit himself to the theory, at present, but simply to set it forth and to consider its claims to acceptance, its advantages, disadvantages and consequences. The existence of a subsensible medium filling all space and possessing, in an initial condition, all the wondrous powers which mind manifests while combined with the body will not appear at all incredible after the establishment, through a long and laborious series of experiments, of the wave-theory of light and of the existence of a subsensible medium extending through-

* Since the theory of a subsensible soul medium suggested itself to us, we have seen a work by Sergeant E. W. Cox, of England, entitled "What am I?" in which we find the following observations: "Another scarcely less ingenious theory is, that the material universe is encompassed with spirit pervading it everywhere, not individualized but in aggregation, as the atmosphere enwraps the earth. That this spirit substance (if so seeming a contradiction in terms may be permitted) penetrates all matter, and moulds it to all shapes. That in organized beings it becomes a distinct individuality, and operates through the vital force that moves all organized structure. That this spirit possesses the germ, grows with it to maturity, and is released from it in the ceasing of organic life. That precisely as the material atoms pass from mineral to vegetable and from vegetable to animal structure, so the spirit advances from being a mere protoplasm of spirit (if the metaphor will be allowed) by the same process of expansion and progression, to have first a separate being, then a development in one stage of existence, then advancement to another stage, and so onward. Thus it is conjectured that the portion of spirit which becomes a man is born with him, grows with him, is in fact *himself*—in a condition in which he is perceptible to the senses of other men, and therefore is to them a material being. The spirit thus matured does not return into the mass, but, when the body falls off from it, preserves its individuality, and is that soul to the contemplation of which the previous chapters have been devoted." (Vol. 1, chap. xliv, p. 362.)

out space, denominated ether. This eternal substance is not susceptible to the senses, and cannot be made known except by the intervention of obstacles—by combination, as it were, with grosser substances.* The existence of a similar substance, a subsensible medium, in which psychical force resides is not impossible; † and in view of the fact that it might be true that when it is combined with grosser substances all the manifestations of mind become evident, the subsensible soul-medium seems to be no more improbable than the subsensible light medium.‡

No chemist or biologist can fail to understand how the supposed substance could be combined with the other substances known to be contained in the human body. The

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* "He cannot consider, much less answer, the question, 'What is light?' without transporting himself to a world which underlies the sensible one, and out of which, in accordance with rigid law, all optical phenomena spring. To realize this subsensible world, if I may use the term, the mind must possess a certain pictorial power. It has to visualize the invisible" (*Lectures on Light*, by Professor John Tyndall, 1872–73, Lect. II). "But, though the region of physical theory lies thus behind the world of senses, the verifications of theory occur in that world" (*Ibid*). "For the waves of sound we have the air of our atmosphere; but the stretch of imagination which filled all space with a *luminiferous ether*, trembling with the waves of light, was so bold as to shock cautious minds. In one of my latest conversations with Sir David Brewster he said to me that his chief objection to the undulatory theory of light was that he could not think the Creator guilty of so clumsy a contrivance as the filling of space with ether in order to produce light. This, I may say, is very dangerous ground, and the quarrel of science with Sir David, on this point, as with many other persons on other points, is that they profess to know too much about the mind of the Creator" (*Ibid*). "Though never seen, the lengths of the waves of light have been determined. There existence is proved *by their effects*, and from their effects also their lengths may be accurately deduced" (*Ibid*).

† If it be objected that physical and psychical forces reside in the same medium and cannot be separated, but are always in synthesis, it is quite as favorable to the theory we are setting forth to suppose that the subsensible medium contains psychical force in a greater degree than any other medium, and in a greater degree than it contains physical force. Then the expression would be, A subsensible medium in which psychical force *predominates*.

‡ It was announced some time since by a celebrated chemist that he had discovered a new gas, *odyle*, in the human body.

human body is a wonderfully complex structure; it comprehends almost all known substances; and it might have among its components a substance of which we know nothing by the senses, and of which we cannot become cognizant except (as in the case of the ether) by the *effects* of the forces which reside in it. The human body possesses all the essential properties of matter from the grossest earth or hardest rock to the finest nerve and tissue. It is the highest product of nature thus far discovered or evolved, and takes up within itself all the qualities of objects and beings lower than itself. The human body would then probably comprehend all possible substances, including the supposed subsensible substance, as it is the most complex of all things, and seems to fulfil the highest requirements of organism.* If the evolution theory is true, the separation of the great homogeneous protoplasm into heterogeneous elements took place before the formation of organisms. At this separation the subsensible medium called ether and the subsensible medium which we have supposed to be the residence of the soul were among the elementary heterogeneous substances. By the re-combination of various portions of these elements in certain proportions certain forces were brought into action and organism took place, which was another advance in heterogenity. From all that we have observed man is composed of all the different elementary substances, and it is a reasonable conclusion that he comprehends within his organism the subsensible substance which is the supposed residence of psychical force. When the subsensible substance is held in combination with the sensible substances, all the functions of perceiving by the senses are performed. The sensations of the external world are conveyed directly to the subsensible substance, because it is compounded with the sensible portions of the body. The subsensible substance may be combined only with the brain, or it may be combined with the whole body; but in either case the operation of the sensitive and the

* It is well to state that there appears to be no reason why the hypothesis of a subsensible existence should not apply to the lower animals, or to any being or organism that evinces the possession of mind, or psychical force.

perceptive powers, physical and psychical perception, must be practically simultaneous. The dissolution of this substance from the rest of the body, at death, is easily supposable on the principles which chemistry and biology have discovered; for it is as easy for nature to dissolve as it is for her to compound.

Having established at least the possibility of a subsensible substance in which the psychical force resides, the question arises as to the effect of the hypothesis on the individuality of the soul, after death. And here we shall encounter some difficulty. In the evolution of organisms, from the lowest to the highest orders, there appears to be no break or *hiatus*—at least none sufficient to make the evolution theory of the origin of species an irrational or improbable supposition in the view of many of the greatest thinkers. But a leap from a sensible order of beings, like man, to a subsensible order of beings, like angels, or persons after death, is totally unparalleled in the development of species. But it must be remembered that in so-called matter we have all grades, from the most gross and compact to the most attenuated and refined; from the rock to the ether there is a gradual transformation, a gradual diminution in consistency and compactness, and a corresponding increase in buoyancy and refinement. This suggestion is in favor of the possible existence of the subsensible soul medium. There is indeed no break in the transformation from rock to air, or gas, or ether; neither need there be any break in going on from ether to the other subsensible medium we have supposed. And yet, so far as the suggestion of a hiatus between sensible and subsensible beings goes, it would be conclusive against the hypothesis in this respect if it had reference to a *new* species, or to a *new* order of beings. But the hypothesis in this regard only has reference to man, in *another state*, his individuality and being remaining essentially the same in a psychical respect. And if it is supposable that organization of this subsensible substance could take place within the body, it is equally supposable that, it being subsensible and volatile, organization need not be destroyed by its dissolution from the sensible body; that, in fact, the great protoplasm of spirit

having once arrived at the heterogeneous state of organism, thus producing individuality and consciousness, it could never relapse into a state less heterogeneous or more homogeneous—that the soul is immortal in its individuality.*

It will now be expedient to consider some of the consequences of the truth of the hypothesis. In the first place, it may be asked, why, if it is true that the souls of men occupy this medium which is around us everywhere, they do not manifest themselves? What consolation do men in the natural state get from their friends who may be in the supposed state? or what injury or disadvantage do men in the former state receive from their enemies in the latter state? The answer is simple. The very fact that this is a subsensible medium must render the existence of persons in it subsensible or not susceptible to the senses. The only way in which the psychical force can be made manifest to us is when this subsensible substance is combined to form a living body, *i. e.*, when a sentient being is born. By biological combination the psychical force becomes manifest; but this combination only takes place perfectly when a sentient being is born. It may take place imperfectly or partially under certain abnormal conditions of the individual, but of this he is not conscious. There is, then, and can be no direct communication

* It is curious to note the fact that, in accordance with the laws of the evolution of organisms, a being may yet be formed in the course of millions of years so attenuated in structure as to answer all the conditions of this subsensible existence. Man is becoming more and more nervous, more and more sentient, more and more psychical, as time passes and evolution proceeds. And it is some comfort, perhaps, to observe that, as this change goes on, man is less and less dependent on a high degree of temperature. The races living in the torrid zone are less active intellectually, less psychical. The races living in the colder regions, within certain limits, are more active intellectually, and more psychical. Psychical operations go on at a low temperature. Age by age a less and less degree of temperature is endurable by man, as he becomes more and more psychical. And if the temperature of the solar system is diminishing, if the constitution of the sun is changing and its heating power diminishing, there is consolation in the theory that man's need of heat is diminishing at a corresponding rate, and his capacity to endure cold correspondingly increasing. He need not, therefore, fear extinction.

between human beings and the souls of the departed. And the fact that spiritualists always require a "medium" to communicate at all with the invisible world shows that it is only when in combination with some sentient being that this psychical substance and force can make itself in any way evident to us. The difficulty in the way of spiritualism, if the hypothesis be true, is that, in order to effect any true, reliable or definite communication, the soul of the "psychic" must leave its body entirely and allow that of the "spirit" to take its place; a thing which appears to be absolutely impossible. Until such a thing is practicable, spiritualism will never attain the certainty of a science, or the reliability or definiteness necessary to make it of any advantage to humanity.

This hypothesis of the soul, properly interpreted, would explain the existence of a "nerve atmosphere," "personal magnetism," "mesmerism," and many or all forms of manifestation of personal power beyond the body. Much of the effect of so-called personal magnetism and the influence of the presence of certain individuals is due, doubtless, to the "expectant attention" of the person affected. But the entire effect cannot be satisfactorily explained in that way; while the theory of a subsensible something having its nucleus and normal residence in the body, but extending itself, at certain times, by its power of expansion, to short distances, makes the whole matter comprehensible. Again the hypothesis will account admirably for the existence of a common consciousness, that indefinite psychical manifestation which has been discovered by metaphysicians, and is recognized of late by all men of advanced thought. This consciousness is different from the individual consciousness, and can be explained readily on the theory of a great psychical force residing in a subsensible medium pervading society, a medium in which all mental organisms inhere, and which constitutes more than an imaginative bond of unity between the individuals of the race.

Having thus sketched the outline of the material hypothesis of the soul, we leave it for the reader to fill it out, conceiving how the future state of the soul may be affected by its

truth, and what will be its powers of locomotion, expansion, improvement and happiness. There is, however, nothing in the theory to show that our means of obtaining knowledge and culture will be essentially different from what they are now. The psychical force will be developed, strengthened and cultured; faculty will be evolved, and new powers added to the soul according to the same laws of evolution which prevail in the sensible world, and which govern the evolution of life and mind in humanity. The hypothesis, if true, places us but little nearer an understanding of the great and awful mysteries of life, past, present and future. It does not enable us to conceive any better of that mystery of mysteries, that great ultimate reality, which is God.

ART. III.—1. *Le Rime del Petrarca con note litterali*, e critiche del Castelvetro, Tassoni, Muratori, Alfieri, Ginguenè. Da C. ALBERTINI da Verona. 2 tom. Firenze.

2. *Essay on the Love, Poetry and Character of Petrarch.* By UGO TOSCOLO. London.

3. *Le Pétrarque en rimes françoises, avec ses commentaires.* Par PHILIPPE DE MALDEGHEM, etc. Paris.

4. *The Sonnets, Triumphs and other Poems of Petrarch.* Now first completely translated into English verse by various hands. With a Life of the Poet. By THOMAS CAMPBELL. London.

5. *Memoires pour la Vie de Petrarque.* Par L'ABBÉ DE LA SADE. Paris.

IN all ages and countries poets have been regarded as an impressible, sensitive race; more susceptible of pleasure and pain than any other class of mortals. If this be true of poets

in general, it will be admitted that it is particularly so of the Italian poets. Thus, none have experienced more joy or more anguish, than the illustrious trio Dante, Tasso and Ariosto.

There is abundant evidence that Petrarch, the subject of our present article, was capable of as strong and deep emotions as any of his melodious brethren. It may, indeed, be justly said, that in tenderness none surpassed the lover of Laura; and it is the unaltered, universal verdict of centuries that, in the unselfish constancy of his devotion, he has had no equal in ancient or modern times. He seems to have been more unfortunate in his love than any of his brethren, not excepting even Tasso, who suffered so much for the beautiful Leonora; and he acknowledges his grief in many a fine sonnet. Yet it is sufficiently evident in all his writings that, however hopeless his passion was, it never ceased for nearly half a century to be a source of delight to him. If upon the other hand he felt many a bitter pang, it is certain that his experience in this respect was not so painful as that of Dante, Tasso, or Ariosto; for, with the exception that he too was a forced exile for most of his life, far from being persecuted by the powerful, either in church or state, he was peculiarly favored by both.

In short, no poet or author of any age has been more fortunate in this respect than Petrarch. Indeed, his popularity among all classes, rich and poor, learned and unlearned, religious and irreligious, is one of the most interesting and remarkable facts in the literary history of the fourteenth century. This will become apparent as we proceed, and will be found to present a striking contrast to the feelings evinced at the present day, under similar circumstances, by a public that claims superior enlightenment.

But although no poet has been translated oftener than Petrarch—although his sonnets have been rendered into every language possessed of a literature; although they are not only admired by the cultivated of every nation, but find echos in every heart that is capable of a generous emotion, there is no story of equal interest in all modern literature more imperfectly understood than that of Petrarch and his Laura. Even the most intelligent class are, in general, content with the most

vague and erroneous views on a subject to which the world is indebted for a chaster, more beautiful, and more truthful delineation of the passion of love in all its moods and ramifications, its joys and its griefs, than is to be found in any other poet, ancient or modern.

Few are aware how much the modern poets of all countries —especially the lyrical poets—owe Petrarch; still fewer are aware that those who have borrowed most from him without acknowledgment are the readiest to disparage his genius. Because none, without stultifying themselves, can deny that his sonnets are beautiful, graceful and tender, those who have thus purloined his charming wreaths but failed to transplant them without depriving them of much of their native fragrance, are obliged to confine their criticisms to such charges as that Petrarch's sonnets are too much alike!

We do not mean that English poets have transgressed in this respect more than the poets of other countries; upon the whole the former are, perhaps, less to blame than the latter, for in none of the principal languages of Europe are there so few translations of Petrarch's best and most popular poems as in English. It would, however, be a grave mistake to infer from this that the indebtedness of English poetry to the muse of Petrarch is comparatively slight. It is no reflection on Shakespeare to say that even he has not disdained to cull an occasional wreath from the Italian bard; he has done so in the tenderer scenes in Hamlet, Antony and Cleopatra, and Romeo and Juliet, but unlike many other poets who have drawn inspiration from the same fountain, if the great dramatist has not imparted additional fragrance to the flowers which he has thus transplanted and naturalized in English soil, he has at least retained more of that fragrance than any other English poet who has borrowed from Petrarch. We are quite aware that some of our readers will be disposed to question the indebtedness of Shakespeare to Petrarch; there are those whose admiration for the author of Hamlet partakes so much of the character of a passion that they regard it as a sort of sacrilege to think it possible that he was indebted for anything beautiful or sublime to any other poet. But facts are not altered by

enthusiasm. A poet is no more independent of all other poets than any member of society is independent of society at large. Although nothing is known of the poets who flourished before the time of Homer, it is not the less certain in the minds of the best critics—even those who regard the Iliad as superior to all other poems ever written—that the Prince of Poets must have availed himself largely of the poetry of others. Be this as it may, let those disposed to deny the indebtedness of Shakespeare to Petrarch bear in mind that among those who have translated many of the sonnets of the Italian bard are Chaucer, Spenser, Wyatt, etc. Thus we have now before us different versions of sonnets which Shakespeare must have read and admired.* Is there anything incredible in the fact that he profited by doing so? If he did profit by it ought we to esteem or admire him anything the less on that account? Does it dim in the slightest degree the lustre of his fame, or in any manner endanger his immortality?

Since Shakespeare did not consider it beneath him to regard Petrarch as an authority on the anatomy of the tender passion, it ought not to be difficult to understand that poets less gifted and less conscious of their own powers have sought to avail themselves to a considerable extent of Petrarch's beauties. Then, what Chaucer, Shakespeare and Spenser had done without incurring much censure, if any, Collins, Cowley and others thought they had almost a right to do; and thus the borrowing went on, and altering so as to disguise the purloined flowers, until more recent poets supposed themselves borrowing from their own countrymen instead of from Petrarch. This is undoubtedly true, for example, of Sir Walter Scott; many passages in his "Lady of the Lake" and "Marmion" are decidedly Petrarchan. Byron, Moore and Shelley have been more cautious in this respect, but it is undeniable that the amatory strains of each are indebted to the Italian bard for some of their finest touches.

Yet the literature of Continental Europe is much more

* This is true, for instance, of sonnet 89, to Sennucio, of which Chaucer makes such happy use in his *Troylus and Cresida.*

imbued with the Petrarchan spirit than English literature. But what is most remarkable in this respect is that the poets of Germany have drawn more inspiration from Petrarch than those of either France or Spain; in other words Petrarch has exercised a much more powerful and extended influence on German poetry than on French or Spanish poetry. This preponderance could be well illustrated by the amatory lyrics of Goethe, Schiller, Chamisso, Gleim, and Uhland. We see evidence of it in Goethe's *Mignon* and "New Love New Life,"* Schiller's "Song of the Bell," and "Hero and Leander," Chamisso's "Woman's Love and Life," and Uhland's "Wreath" and "Dream." The fault of the German poets has been, however, not that they have drawn too freely from the Petrarchan fountain in their amatory effusions, but that they have been too literal in their interpretations—too ready to substitute sensuality for spirituality. Thus, for example, it is not alone in his lyrics that Goethe allows himself to be unduly influenced by the example of Petrarch; he does so but too openly in his letters to Frau von Stein; and, what is more remarkable, the husband of that lady, unlike the husband of Laura, as some think (assuming it to be true that the latter was married), seems to have considered himself, though a privy councillor, much more honored than degraded by the avowed passion of the author of the "Sorrows of Werther" for his wife.

Even so rapid a glance as the above at the influence exercised by Petrarch on the poetical literature of Europe for a period of nearly five centuries, will, we think, render it needless to adduce any further argument to convince the intelligent reader that the Italian bard should be better known in this country at the present day than he is. We do not urge this because we think that any lack of gallantry is among the faults of our people. It is generally conceded, even by those most disposed to criticise us, that by no people is woman treated with more respect and consideration. But Petrarch presents the passion of love in a more refined and chaste form than any other poet; he, more than any other writer, may be said

* *Neue Liebe Neues Leben.*

to have cultivated it so as to develop all its beauties without in any way marring its essential attributes. What is more, it is impossible to peruse his sonnets with ordinary care without feeling convinced that selfishness is incompatible with love. No lesson is more strongly inculcated by Petrarch than that it is but a spurious love which has no better foundation than lust or money, or both. It is because he thus towers far above all other votaries of the amatory muse that more ladies have translated Petrarch than any other poet. Nor have any been more successful in rendering his tenderest and happiest effusions. Thus, among those who have given English versions of more or less of Petrarch's sonnets, are Lady Dacre, Hon. Mrs. Norton, Anna Hume, Charlotte Smith, Mrs. Wrottesley, and Miss Wollaston. The translations of some of these ladies are at once the most faithful and most elegant we have seen in any language.

The family of Petrarch had long occupied a respectable rank in Florence. His paternal ancestors for several generations were notaries. His father, Petracco (diminutive of Peter), being a member of the Ghibelline, or White party, was expelled from his native city, like Dante and many other distinguished Florentines. As some plausible pretext was required at this time for the ostracism of men of influence, Petracco was accused of having officially issued a false deed. For this he was brought to trial, and a trial under such circumstances was necessarily a condemnation. Then the highest penalty prescribed by the law was equally a matter of course. Accordingly, Petracco was sentenced to pay a fine of one thousand *lire*, and, if this sum was not paid within ten days, to have his hand cut off. Since he was placed under no restraint in the meantime, it is sufficiently evident that all the party in power wanted was to get rid of one whose influence they had occasion to fear. Of course the notary did not wait to have his hand cut off, but fled as quickly as possible, taking with him his wife, Eletta Canigeani.

Petracco first found an asylum at Arezzo, in Tuscany. Here he intended to remain until his party returned to power. Soon after they attempted to take Florence by assault, but

were repulsed. Petracco having taken part in the attack, not only made his chance of returning to his native city more hopeless than ever, but also rendered it dangerous, if not impossible, for him to reside anywhere within the jurisdiction of the republic.

That upon which the attack was made on Florence was, however, by no means an inauspicious time for the family, since it was on the same night, between the 19th and 20th of July, 1304, Francesco Petrarch was born. For several years after the birth of the future poet his father was obliged to wander about from place to place, often finding it difficult to secure for his family even the necessaries of life.

Partly because Eletta, Petrarch's mother, was not included in the sentence passed on her husband, and partly because she had the advantage of belonging to one of the most distinguished families in Florence, she was soon permitted to reside on a small property belonging to her husband, at Ancisa, on the banks of the Arno, fourteen miles from Florence. Petracco visited his wife by stealth as often as possible, and continued to do so for seven years. During this time they had two other children; but one died in infancy, the other, named Gherardo, was educated with Petrarch.

Wearied with this sort of life—being still exposed to serious risk in visiting his wife and family—Petracco removed to Pisa, where he was soon joined by his wife and children. Petrarch was now eight years old, and nearly all his numerous biographers declare that, thanks to the intelligence and affectionate care of his mother, he had learned more than the majority of those twice his age who were sent to the best schools. The stay of the family at Pisa was but brief, Petracco having been disappointed in certain expectations which some of his friends had led him to indulge.

But even the few months he remained at Pisa exercised a considerable influence on the destiny of Petrarch, for it was there he received his first lessons from the old grammarian, Convennole da Prato. Young as he was when placed under the tuition of this man, he had the perception to see that he was but a common-place educator. He frequently alludes

to him in speaking of his early struggles. At no time did he regard him as any better fountain of knowledge than one that could be easily exhausted. At the same time he pays him what may be regarded as a solid compliment, for he compares him to a whetstone, which is indeed blunt itself, but sharpens the appropriate metal brought in contact with it. But this scarcely does the old grammarian justice, for Petrarch had not been more than a month under his tuition when he predicted with the utmost confidence that he was destined to attain eminence as a thinker. The prediction was very gratifying to his mother, and she had strong faith in it. But it was different with his father, who did not wish him to have any nobler or more profound thoughts than those relating to his own profession and those of his ancestors for ages. Eletta, seeing that her husband was intent on making Petrarch a notary, although the profession had served his own purpose but indifferently, did not venture to oppose him, but suggested that, since he had a partiality for a connection with the courts, there might be an improvement in having their son educated as an advocate. To this Petracco readily assented, so that the future poet was scarcely nine years old when it was decided to use every possible effort to have him properly educated for the bar.

Failing to secure a position at Pisa which would enable him to secure a comfortable support for his family, Petracco resolved to try his fortune elsewhere; and Avignon being the residence of the pope at this time, large numbers of Italians resorted to it in the hope of being able to gratify their ambition for honors or preferments, he removed thither in 1313. But, finding it too luxurious a place for one of his slender means, with a family to support, as soon as he was able to make suitable arrangements for that purpose, he took up his residence at Carpentras, a small, quiet town, which, while living was cheap in it, placed him within easy reach of the great centre of influence, power, and wealth.

In all the wanderings of the family, whatever privations they suffered, Eletta never neglected the education of her son. Sickness alone—utter inability—prevented her from giving

her daily lessons to Petrarch. In short, such was her fond and thoughtful solicitude for his welfare, in all the vicissitudes through which she had to pass as a wandering exile, it is not to be wondered at that no man ever entertained a higher idea of the unselfish devotion and generosity of woman than he. For he has not merely immortalized Laura; by common consent of enlightened mankind for many generations, if ever a mortal has been made divine by human genius, Laura may justly be ranked among the divinities, as an illustration of all those virtues, qualities, and personal charms which render woman at once an object of respect and esteem, admiration and love.

But those hitherto unacquainted with the story of Petrarch, if any such there be among our readers, must not be made to anticipate incidents and events which can be adequately appreciated only in their natural order. Although Convennole da Prato was, as we are informed, not a brilliant educator, it was no slight source of pleasure both to Petrarch and his mother that the old grammarian also was induced to remove to Carpentras, for he immediately resumed his lessons to the young poet. Thus while Convennole instructed Petrarch in grammar, rhetoric, and logic, his mother instructed him in ethics, and at the same time imbued his mind with the precepts of religion. Some of the poet's biographers give the lady the further credit of being the best Latin teacher he ever had, adding that to her he was indebted for that thorough knowledge of that noble tongue which enabled him to write in it with such classical elegance and precision, and induced him to write so many of his works in it, especially those which he considered most important and most likely to endure. We shall see, as we proceed, that if Petrarch was mistaken as to the effect on his own fame of composing so many of his works in Latin, it was not the less true that his taste and love for that noble tongue were of incalculable benefit to literature. True, Dante had done a good deal for the revival of letters before Petrarch, but the efforts of the former in that direction were trifling in themselves and in their results compared to those of the latter; for it should be remembered that the world is in-

debted to Petrarch for the discovery of several classic manuscripts long supposed to be hopelessly lost. Suffice it to mention here Quintilian's *Institutes of Oratory*, which he discovered at Arezzo, the *Familiar Epistles* of Cicero, which he discovered at Verona, and Cicero's *Letters to Atticus*, which he found among a quantity of rubbish offered for sale by a coachman at Venice as matter for lining trunks. Had his studies and researches resulted in nothing more than bringing these priceless works to light, not to mention the active and enthusiastic part he took during a period of nearly half a century in contributing in every way in his power to the establishment of colleges and libraries, he would have had a strong claim on modern civilization.

At the outset, Petracco, who had some taste for learning himself, was proud of the progress made by Petrarch in Latin. The young poet's admiration for Cicero was particularly gratifying to him, as it led him to hope that the study of the great Roman orator and advocate would inspire his son with a love for the law. It was under this impression that he sent Petrarch to the University of Montpellier, at the age of fifteen (1318). But it was not long before he became satisfied that it was an erroneous impression, and therefore entirely altered his wishes in that respect. He went so far in his efforts to modify the tastes and aspirations of Petrarch as to request his tutors at the university to prohibit him altogether from the study of the classics. It is, however, but justice to the honest notary to remember that he did not do this until he found that for every hour Petrarch devoted to the study of law he devoted at least twelve hours to the study of Virgil and Cicero; and, as is generally the case in such circumstances, it was in vain the professors of the university tried to divert his attention from ancient Roman literature to modern French law. While his fellow-students found it sufficiently difficult and irksome to study the grammar, in connection with such selections from the easier classics as were given in the text-books of the day, the young poet delighted in reading the Æneid of Virgil and the Tusculan Disputations of Cicero in

manuscripts rendered more or less illegible by the smoke and dust of ages.

As might have been expected from these facts, when Petrarch had spent the prescribed four years at the University of Montpellier, he knew little more about law than he did before he entered; and however little he knew about it, he had no ambition to know any more. Yet his father still hoped to make him a great jurist. The University of Bologna was then the most celebrated school in Europe of both canon and civil law, and it was resolved that Petrarch should complete his legal studies there. Accordingly, he was sent thither in 1323, accompanied by his brother Gherardo, and his inseparable friend Guido Settimo. But it was soon found that neither threats nor rewards could induce the young poet to forego the charms of the classics.

His father being much displeased at this resolved to adopt harsher means for carrying out his wishes than he had yet had recourse to. With this view he proceeded to Bologna, expecting to surprise his son in the midst of his transgressions. It seems his mother sent word to Petrarch, so that fearing the worst his first care was to hide his Latin books. But Petracco was too fully determined to be diverted from his purpose without making a strong, earnest effort for its accomplishment. He searched high and low for the hidden treasures. To the horror of Petrarch, he finally succeeded in finding them, and so far forgot himself in his indignation that he threw them into the fire. But he soon relented; deeply affected at his son's agony and tears, he eagerly snatched Virgil and Cicero from the flames, and presenting them to Petrarch, said, "Virgil will console you for the loss of your other MSS., and Cicero will prepare you for the study of the law."

This soothed Petrarch, and he thanked his father; but while he had every disposition to please him, his tastes remained unchanged. If he ever hesitated for a moment in his choice, he did so no longer after he had formed the acquaintance of Cino de Pistoia, one of the law professors, but at the same time a lyrical poet of no mean order. To this day he is

regarded by his countrymen as the most tender and harmonious of all the lyrical poets who had written in Italian before Petrarch. Cino de Pistoia performed his duty faithfully as a professor of law by doing all in his power to induce his new pupil to carry out the wishes of his father, and the object of his being sent to the university. Finding this in vain, he enabled Petrarch to avail himself to the fullest extent of his literary culture, which proved to be of a high order. He, too, had the perception to see that Petrarch was destined to become illustrious. It is easy to understand how much delighted the young poet was with the society of one capable of sympathizing with him in his taste for classical literature as well as for poetry. But while Petrarch is congratulating himself on his good fortune in forming the acquaintance and gaining the good-will and esteem of one in every respect so congenial, he receives the sad intelligence of the death of his mother. The reader is already aware that there could have been no kinder or better mother than Eletta. Petrarch fully appreciated her worth, and was now profoundly grieved. Several of his biographers are of opinion that the monody he wrote on her death was among his earliest lyrical efforts. There is a copy of it in his own handwriting still extant in the University of Bologna. It extends to thirty-four verses—one for each year of her life; her early death being an additional source of grief, not only to her son and her whole family, but to all who enjoyed the pleasure of her acquaintance.

We have already alluded to the influence exercised on Petrarch by this exemplary lady, and of its obvious tendency to give him an impression of the female character in the highest degree favorable. At once beautiful, modest, affectionate, self-denying, and possessed of liberal culture and a good understanding, it was not strange that a son to whom she was always so devoted and indulgent should easily believe that one whom he regarded as resembling her in some of her best characteristics was worthy of the highest admiration and of the strongest and most lasting affection of which the human mind is capable. Those who regard the passion of Petrarch for Laura as too deep and grand in its portraiture

and too remarkable in its history to be genuine, should bear in mind the character of the gentle and good Eletta, to whom the poet owed so much. Then the grief of Petrarch for the loss of such a mother was but little assuaged when the news was brought him that his father also was dead, his death having undoubtedly been hastened by that of the faithful and tender companion of his wanderings, and the patient, cheerful participator in his privations and sorrows. Altogether apart from the loss of his mother, the poet could not now remember without bitter pangs how fondly anxious the old man had always been, while wandering, often in poverty, from place to place, to secure for him the highest order of education attainable in his time. Poor as Petracco was he always managed to secure his son his place at the university. Now, when he was no more, Petrarch found it necessary to leave Bologna. He returned to Avignon, accompanied by his brother Gherardo. All the property left them by their father was but trifling, but such as it was they had but a small part of it to get, the executors having betrayed their trust. What Petrarch was most anxious about was a MS. of Cicero, which his father had always highly prized. Referring, in one of his letters, to this condition of affairs, Petrarch says: "The *guardians*, eager to appropriate what they esteemed the more valuable effects, had fortunately left this MS. as a thing of no value."

The two brothers, finding themselves thus almost penniless, and seeing no prospect of securing an honorable maintenance otherwise, decide on entering the church, and are readily accepted. Petrarch was now in his twenty-second year. If it be true that the combined influences of culture and adversity soften the heart, it may well be believed that that of the poet was now in a tender, impressible state. And so the fact proved. He was not quite twenty-three when the event occurred which was the most important in his life in its effect on his genius. While attending early mass on the 6th of April, 1327, at the church of St. Clara, at Avignon, he was struck with the beauty of a young lady who happened to be near him. Petrarch relates that the lady who thus made an impression on him, which, sudden as it was, could never be

effaced, was a little younger than himself, and dressed in a green mantle sprinkled with violets, on which her golden hair fell in plaited tresses. This is the lady in whose history the world has now felt so lively an interest for nearly five centuries, as Petrarch's Laura; this is the name so familiar even to the echo of every beautiful valley in all countries in which the tenderer emotions of our nature receive any culture.

It is impossible to doubt that Laura possessed great personal charms. There is sufficient evidence of this, altogether independently of the numerous compliments paid to her beauty by her lover; although, much as Petrarch praises her physical attractions, he is still more enthusiastic in praising her modesty and virtue. Of all the biographers who have attempted to group her various characteristics, both physical and mental, so as to form a complete and faithful portrait, Ginguenè seems to us the most successful, and accordingly we transcribe his description in his own words:

"Ses yeux, étaient à la fois brillants et tendres, ses sourcils noirs et ses cheveaux blondes, son teint blanc et animé, se taille fine, souple et légère: sa démarche, son air avient quelque chose de céleste. Une grâce noble et facile régnait dans toute sa personne. Ses regards étaient pleins de gaieté, d'honnêteté, de douceur. Rien de si expressif que sa physionomie, de si modeste que son maintien, de si angélique et de si touchant que le son de sa voix. Sa modestie ne l'empêchait pas de prenche soin de sa parure, de se mettre avec goût, et lorsqu'il le fallait, avec magnificence. Souvent l'éclat de sa belle chevelure etait relevé d'or ou de perles; plus souvent elle n'y mêlait que des fleurs. Dans les fêtes et dans le grand monde elle portait une robe verte parsemée d'etoilles d'or, ou une robe couleur de pourpre, bordée d'azur semé de roses, ou enrichie d'or et de pierreries. Chez elle et avec ses compagnes, délivrée de ce luxe dont on faissait une loi dans des cercles de cardinaux, de prélats et à la cour d'un pape, elle préférait dans ses habits une élégante simplicité."*

There are circumstances in the story of Laura which are much more remarkable than the passion which she inspired by

* Ginguenè *Hist. Litt. d'Italie*, t. 11, p. 342.

her beauty, accomplishments, and amiable qualities. It is a disputed point among those who have most thoroughly investigated the subject whether the lady was married or remained single; but the preponderance of evidence is undoubtedly in favor of the former. This, however, is by no means the strangest fact in the history of Petrarch and Laura. It is not more so than the love of Dante for Beatrice, or the love of Goethe for Frau Von Stein, and many other loves indulged by those who have bestowed, perhaps, too much thought and admiration on the beautiful and fascinating portraitures of the classic poets.

But the case of Petrarch is unique, at least in one particular. There have been instances in all ages of distinguished men being known to be in love with the wives of their neighbors without exciting any serious resentments. But the case of Petrarch is the only well-authenticated one in which a descendant of the husband whose wife had been the object of such a passion has come forward to claim that distinction as an honor to his family. This the Abbé de Sade has boldly and ably done in his elaborate *Memoires pour la Vie de Petrarque;* and, what is more, it is now almost universally admitted that by his learned and careful researches he has settled the question.

Another curious feature of the controversy is, that while the Abbé devotes so much labor and time to claiming for his ancestor the honor of having a wife who was beloved by Petrarch, he tells us, that that ancestor himself regarded the whole matter in a very different light—that, in fact, he was so jealous with Laura on account of the passion of Petrarch for her that his reproaches caused her many a bitter tear. The main facts put forward by the Abbé may be briefly stated thus: Laura was of ancient and noble extraction. She was the daughter of Audibert de Noves by his wife Esmessenda, born at Avignon, probably in 1308; she inherited a considerable fortune, and was married in 1325 to Hugh de Sade, by whom she had eleven children. The lady was already married when Petrarch first saw her and was smitten by her

charms.* Although the amour was carried on throughout her married life, and the love of Petrarch terminated only with his life, it was nevertheless *une passion honnête*. "In order to keep alive the ardor of his passion," says the Abbé, "Laura thought proper to feign a coldness of demeanor, and to show some marks of rigor; for by this succession of kindness and reserve, she contrived, though a woman of sensibility and prudence, to enslave the greatest poet of the age, without the smallest imputation on her character."† All these facts and allegations the Abbé supports with strong arguments—certainly by more solid arguments than those adduced either by those who maintain that Laura was an allegorical personage, those who claim that she is to be regarded as a type of the Virgin Mary, or those who allege that, after all, Petrarch was a happy lover, and that his mistress was accustomed to meet him in

* It is related by several of Petrarch's biographers that soon after Charles of Luxemburg was made emperor he visited Avignon; and that, being aware of the celebrity of Laura, and meeting her at a ball, he went up to her and kissed her forehead and her eyes. Referring to this, her lover says: "'This *sweet* and strange action filled me with envy." There are not many lovers at the present day who would regard such an "action" as a "sweet" one. Still the story is not incredible, for if the admiration of the poet for his wife flattered the vanity of Hugh de Sade, there is no reason why the admiration of the emperor for the same lady should not flatter the vanity of Petrarch, especially as no one had a stronger faith than he in the "divine right" of kings and emperors.

† Among those who have ably opposed the claim of De Sade, and at the same time maintained the purity of Petrarch's love, is Alexander Fraser Tyler, who has written an elaborate paper on the subject in the fifth volume of the Transactions of the Edinburgh Royal Society. The chief value of this, however, consists in the pains the author takes to show that Petrarch was not merely a poet, but the universal genius of his time. "The works of Petrarch," says Mr. Tyler, "bear evidence of his ability as a politician, theologian, and philosopher, and it is in these characters that he appears to have been chiefly distinguished by his contemporaries; but it is not on these foundations that the lasting structure of his fame has been reared. It is to those incomparable verses, in which he has celebrated the accomplishments, and bewailed the fate, of the beautiful Laura, that Petrarch has been indebted for his permanent reputation. The history of the poet's passion for his lovely mistress must ever be regarded as forming the most interesting portion of his annals."

that delightful Valley of Vaucluse, which he has also invested with undying fame.

Having thus presented the Abbé's theory in miniature, we now proceed to give an outline of his arguments. In the ancient manuscript of Virgil, which was the favorite book of Petrarch, the one which he read oftenest and with most delight, has been found a note in Latin, on the margin, in the handwriting of Laura's lover, bewailing the lady's death. Some have denied the genuineness of this note, but without any stronger reason than that it is incompatible with their own theories. At the present day, however, it is generally, if not universally, regarded as the first outpouring of the poet on hearing of the death of his mistress, before he could sufficiently compose his thoughts for those beautiful sonnets, in which, subsequently, he so tenderly mourns her loss. The following is as nearly literal a translation of that famous obituary as the idiomatic differences between Latin and English render possible and proper; for the benefit of those sufficiently acquainted with the original, we transcribe it at the bottom of the page, so that those who, like certain heads of universities, have an antipathy to the Roman tongue, may pass it by, and still know all that is necessary to be known about Petrarch's passion for Laura:

"Laura, illustrious for her virtues, and for a long time celebrated in my verses, for the first time appeared to my eyes on the 6th of April, 1327, in the church of St. Clara, at the first hour of the day. I was then in my youth. In the same city, and at the same hour, in the year 1348, this luminary disappeared from our world. I was then at Verona, ignorant of my wretched situation. Her chaste and beautiful body was buried the same day, after vespers, in the church of the Cordeliers. Her soul returned to its native mansion in heaven. I have written this with a pleasure mixed with bitterness, to retrace the melancholy remembrance of '*my great loss.*' This loss convinces me that I have nothing now left worth living for, since the strongest cord of my life is broken. By the grace of God, I shall easily renounce a world where my hopes have been vain and perishing. It is time for me to fly from Babylon when the knot that bound me to it is untied."*

* "Laura, propriis virtutibus illustris, et meis longum celebrata carminibus, primum oculis meis apparuit sub primum adolescentiæ meæ tempus,

The precious manuscript in which this note was written belonged for nearly two centuries to the Ambrosian Library at Milan, but belongs now, or at least did belong recently, to the Imperial Library at Paris. On the same manuscript other obituary notes have been found in the same handwriting, including one on the poet's only son, and several other dear friends. These are so incontestably in the handwriting of Petrarch that they are regarded by all competent, impartial judges as confirming the authenticity of the note on Laura. The one on his son is particularly interesting, showing, as it does, that the young man caused him no slight trouble and anxiety, and was deeply mourned by him when he died. That also we copy below, as affording more than one lesson for the classical student.*

The Abbé proceeds to inform the reader that two hundred years after this period Maurice de Seves, an antiquary of Lyons, made a search in the church of the Cordeliers for the tomb of Laura. In the burial-place of the Sade family he discovered a plain stone which, although without any inscrip-

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anno Domini 1327, die 6 mensis Aprilis, in ecclesia Sanctæ Claræ, Avenione, hora matutina; et in eadem civitate, eodem mense Aprilis, eodem sexto, eadem hora prima. Anno autem 1348, ab hac luce lux illa subtracta est: quum ego forte tunc Veronæ essem, heu fati mei nescius! Rumor autem infelix, per litteras Ludovici mei, me Parmæ repperit, anno eodem, mense majo, die 19, mane. Corpus illud castissimum atque pulcherrimum in loco fratrum Minorum repositum est, ipso die mortis, ad vesperam. Animam quiden ejus, ut de Africano ait Seneca, in Cælum, unde erat, rediisse mihi persuadeo. Hoc autem ad acerbam rei memoriam amara quadam dulcedine scribere visum est, hoc potissimum loco qui sæpe sub oculis meis redit, ut cogitem nihil esse debere quod amplius mihi placeat in hac vita, et effracto majori laqueo tempus esse de Babylone fugiendi, crebra horum inspectione ac fugacissimæ ætatis æstimatione commoneat. Quod prævia Dei gratia facile erit, præteriti temporis curas supervacuas, spes inanes, et inexpectatos exitus acritur et viriliter cogitanti."

* "Johannes noster, homo natus ad laborem ad dolorem meum, et vivens gravibus atque perpetuis me curis exercuit, et acri dolore moriens vulneravit, qui cum paucos lætos dies vidisset in vitâ suâ, obiit in anno Dmi 1361, ætatis suæ xxiv. die Julii x. seu ix. medio noctis, inter diem Veneris et Sabatti. Obiit autem Mlni, in illo publico excidio pestis insolito, quæ urbem illam hactenus immunem talibus malis nunc autem reperit atque invasit."

tion, accorded with the description given by tradition of that placed over Laura. The grave was accordingly opened, and in addition to some bones a small casket of lead was found, fastened with a brass wire and containing a piece of parchment, and a bronze medal having on one side a miniature of a woman, and round it the four letters M L M I. The parchment contained a sonnet which, on being deciphered, proved to be one in praise of Laura. Though evidently not written by Petrarch, it was as evidently by some friend and admirer of the poet. At all events the only information it contained was that this "green and beautiful laurel sprang up and died in the city of Avignon."

The Abbé admits that neither the casket nor the parchment gives any intimation as to whether Laura was married or single, but he claims, with good reason, that the fact of her grave being in the part of the church belonging to the Sade family, is strong evidence by itself. He next proceeds to show that in his Latin works Petrarch always calls Laura *mulier* and *fœmina* (woman or matron), never *virgo* or *puella* (maiden or girl), and the argument is certainly a forcible one—much more so than the additional one which maintains that in his Italian works the poet calls her *madonna* or *donna*, and never *virgine* or *donzella*; for the Italians are by no means so particular in making these distinctions between matron and maid as the ancient Romans.

In sonnets 162 and 185 Petrarch complains that jealousy often deprived him of the pleasure of seeing Laura. The Abbé holds that he could not have meant the jealousy of her parents, brothers or sisters, since the term *gelosia* is never applied to them by any correct Italian writer or speaker. Again the Abbé says, that if Laura had been unmarried Petrarch would not have entitled the poem composed in honor of her *Trionfo della Casteta*, but *Trionfo della Verginita*, for all his examples are taken from married women, with the sole exception of a vestal virgin. Finally the Abbé claims that one of Petrarch's dialogues with St. Augustine settles the question as to Laura's marriage, since in it the poet expresses his regret that Laura's constitution had been exhausted by frequent child

bearing—*corpus ejus crebies partubus exhaustum.* This might reasonably have been said of a lady by no means robust, who had eleven children. In several of the earlier manuscripts *partubus* is abbreviated to *ptub's*. This, the Abbé thinks, makes his case all the stronger, because it is in accordance with the characteristic modesty of Petrarch. And here he had two reasons for avoiding to write out in full a word which some might regard as indelicate; he was afraid of offending Laura by using such, and he believed that an indelicate word should not be used in a dialogue with a saint like Augustine.*

His opponents, however, take a different view of the case. They cannot deny the abbreviation, but they maintain that it is not that of *partubus*, but of *perturbationibus*—mental disquietude. At one time the dispute became so warm that the question was submitted to experts, men who were at once good latinists and experienced manuscript students, and the result was that Caperonnier, Boudet and Bezot, of the King's Library at Paris, confirmed the reading of the Abbé as correct.

It would lead us too far to give even the most cursory examination of the various other criticisms made on his arguments, either by those who claim that Laura was a heartless, coquettish maid, those who maintain that she was a prudish maid who never meant to marry any one, or those who, while insisting that she was never married, are equally positive in alleging that she was in every sense the willing mistress of Petrarch.

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* Some who oppose the theory of the Abbé place much stress on the fact that nowhere does the poet speak of any of Laura's children, or of her husband. Others who accept that theory blame Petrarch for the omission. He is also censured for having made no reference in any of his sonnets to his daughter, Francesca, who was the solace of his old age, and whom Boccacio praises, in one of his most interesting letters, for her beauty, sweetness of disposition, and modesty. But there is nothing in either circumstance incompatible with his being kind and affectionate; on the contrary, both, taken in connection with the poet's comparative indifference to the charms of other ladies, only prove the more conclusively the all-absorbing character of his passion for Laura.

But even if the limits of our article permitted us to scrutinize these various theories, it would be needless to do so at the present day, since, as we have already remarked, the opinion now almost universally entertained by critics and biographers is that Laura was a married woman—a modest and prudent, though beautiful and kind-hearted, matron. And this is almost to say, in other words, that the Abbé de Sade may be regarded as having fully succeeded in proving, that whatever honor there was to the husband of Laura in having a wife capable of inspiring such a passion as that of Petrarch, that honor is due to Hugh de Sade, and proportionately to the whole De Sade family.

But there is one of his theories which we think it must be admitted the good Abbé has not proved, namely, that his honored ancestor was a very jealous man. Had he been jealous at all it would have been scarcely possible for his wife to have had interviews with Petrarch so often as she confessedly had, those interviews sometimes occurring at her own house, sometimes at the residences of mutual friends, and sometimes in the beautiful Valley of Vaucluse. Still less could she have openly received frequent presents from her lover; not to mention those beautiful and tender sonnets, so full of passion, of which there must have been a new one almost every day for a long period, and of which neither the author nor the subject was unknown to any intelligent citizen of Avignon. The clear inference from all these circumstances is that Hugh de Sade viewed the whole matter pretty much as the good Abbé has done. The vanity of the former was flattered by the love of so distinguished a man for his wife. Let those who regard this as improbable ask themselves, is it anything more so than the course of the Abbé would have seemed to those unacquainted with the facts? We are bound to believe that if the latter had a wife he would have felt honored on finding that so great a man as Petrarch, or even one not quite so great, was in love with her, in the habit of writing sonnets proclaiming that love to the world, praising the charms, both physical and intellectual, which inspired it, and at the same time in the habit of meeting her from time to time for the purpose of

expostulating with her on her cruelty!* Since all this would evidently have been a source of delight to the descendant, why may it not be believed that it was equally so to the ancestor, except it be held that the Sade family have become more philosophical, less sensitive and less selfish in the nineteenth century, in affairs of the heart, than they were at the beginning of the fourteenth century.

Leaving this problem to be solved by those who have more time and inclination to discuss it than we have, we proceed to show that, however profound was the passion of Petrarch for Laura, it allowed him sufficient time not only to write copiously and elegantly on various other subjects as well as love, but also to gain the esteem and friendship of kings and emperors, bishops and archbishops, cardinals and popes. On reaching this stage of our discussion the first fact that occurs to us is that whatever were the relations between Petrarch and Laura they caused no public scandal. Otherwise the poet would not have been openly admired and petted as he was by so many of the highest dignitaries of the church, including three successive popes. It should be remembered that, not only did more than one pontiff and several cardinals eagerly seek his society while his passion for Laura was at its maximum height and most generally known; he was also favored with several benefices in the church, and still more important honors were offered to him which he did not accept. Instance the position of Apostolic Secretary, offered to him, it seems, by more than one pope, but declined, because it would

* If we are to believe the poet himself, and there seems no good reason why we should not, he never loved any other woman; although he admits more than once that he was from time to time on terms of close intimacy with several. Be this as it may, we find in sonnet xvii. the following:

E, se di lui forse *altra donna* spera,
Vive in speranza *debole e fallace*,
Mio, perche sdegno cio ch' a voi dispiciace, etc.

If *any other hopes to find*
That love in me which you despise,
Ah! let her leave the hope behind;
I *hold from all* what you alone *should prize*.

occupy more of his time than he was willing to divert from his favorite studies. True, both his Latin and Italian poems contain many severe sarcasms on the papacy. He it was who first called the spiritual capital of Christendom the modern Babylon. This, indeed, is the name he most frequently calls Avignon, the corruption of which he denounces in many a fine sonnet, and in language as unequivocal as ever Luther, Calvin, or John Knox has applied to papal Rome.

His being an archdeacon, canon, prior, etc., did not prevent him from freely criticising the condition of the church in prose as well as in poetry, in Latin* as well as in Italian. Thus comparing the two spiritual capitals with each other, he says that in great Rome there were *two* lions, in little Avignon there are *eleven* —Cum in magna Roma *duo* fuerint *leones*, in parva Avignone sunt *undecim*. Petrarch, like Luther, had expected great things from the general Jubilee, but the former, like the latter, tells us that he saw certain things at the Jubilee which excited his hatred much more than his pleasure—Post Jubiliæum sic *me adhuc viridem, pestis ille* deseruit, ut *incomparibiles magis odi mihi sit quam fuerit voluptati.* What disgusted Petrarch most was the consecration to a bishopric of a person notoriously and ridiculously unfit to be a deacon. This consecration the poet does not hesitate to stigmatize as a farce, and in one of his letters to Rienzi he assigns it as one of his reasons for declining the position of Latin secretary to the Sacred College. In another letter written to his friend,

* In the sixth and seventh of his Latin eclogues, Petrarch exhibits Clement VI. in the character of Mitio, and makes St. Peter reproach him, under the name of Pamphilius, for the condition in which he keeps his flock. He also inquires rather sarcastically what he has done with the great wealth intrusted to him. Mitio replies that he has kept the gold arising from the sale of the lambs, and that he has given the milk to certain friends of his. As for the rams and goats, they played their usual gambols in the meadow, and as long as they let him alone he was content to look on at their performances. This satire had not been long written when some officious person called the attention of the Pope to it. But Clement VI., who was himself a scholar, a man of fine taste, and at the same time possessed of good sense and a kind disposition, instead of resenting the freedom of the poet, conferred on him the rich priory of Migliorino.

Cardinal Colonna, whom he revered and loved, he describes one of the bishops whose consecration he had witnessed. This person had, it seems, purchased a connection with a certain nominal college by money made in manufacturing bad *aqua vitæ*, so that he might thereby get the reputation of being a learned man. His next care was to secure a recommendation from his archbishop, for which he was also understood to have paid handsomely. The name of this divine was *Corigiuro* and that of his see *Neuorzo*, as if the poet, satirist and archdeacon had indulged in prophecy in regard to a certain divine, college and diocese of our own time and country. But the Latin letters of Petrarch can be seen but by few at the present day. There is not much use in quoting them in the original, and if translated extracts be given their genuineness will be denied by those whom they describe but too faithfully. But it is different with those sonnets inspired by "consecrations" of the kind alluded to; the authenticity of the sonnets cannot be denied. One of these (cv.) opens thus:

> "May fire from heaven rain down upon thy head,
> Thou most accurst; who simple fare casts by,
> *Made rich and great by others' poverty;*
> How dost thou glory in thy vile misdeed!
> Nest of all treachery, in which is bred
> Whate'er of sin now through the world doth fly;
> Of wine the slave, of sloth, of gluttony;
> With sensuality's excesses fed!" *

Still worse, if possible, is sonnet cvi.:

> "Covetous Babylon, of wrath divine
> By its worst crimes has drained the full cup now,
> And for its future Gods to whom to bow,
> Not pow'r nor wisdom ta'en, but lust and wine."

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* Famma dol ciel sulle tue trecce piova,
Malvagia, chedal fiume, e dalle gheonde
Per l'altru' impoverir se' ricca e grondo,
Poi che di mal oprar tonto ti giova!
Nido di tradunenti, in cui si cova
Suanto mal per lo mondi oggi si spande,
Di vin serva, dilette, edi vivande,
In cui lussuria fa l'ultima prova!

Alluding to the hideous shame of elevating ignorance and depravity, while allowing real merit, piety and worth to die in obscurity and neglect, the poet proceeds (sonnet cvii.):

> "O furnace of deceits, O prison dire,
> Where *good roots die* and the *ill weed grows a tree*," etc.*

It is but fair to admit that it does honor to the princes of the church in those days, whatever their faults may have been, that, far from entertaining any spite against the satirist of the popedom and of the alleged licentiousness prevailing at the papal court, they never treated him otherwise than kindly and generously. Nor was any one more honored at his death by the church than Petrarch.†

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* Oh fucina d'ingami, oh prigion dira,
Ove l' ben more, e 'l mal si nutre e cria, etc.

† The reader will be the better able to appreciate the kind indulgence thus allowed to Petrarch, both throughout life and in death, if he will only ask himself how little indulgence would be allowed at the present day by many who call themselves princes of the church, even to those who merely differ in opinion with them, if they had one tenth the power to gratify their resentments which the contemporaries of Petrarch had. Not, indeed, but there are learned, liberal, and generous catholic prelates at the present day. Nay, there are such in the United States, but for some time past it has seemed as if the Sacred College had come to the conclusion that there are some of our dioceses and archdioceses which, having long had the benefit of princes of the church worthy in every respect of the name, should now be content with "princes" who are so only by a very great stretch of conventional courtesy, in the same way as men not qualified, either by nature or education, for corporals, are sometimes dubbed generals. There is, however, one recent instance in which a good prelate has succeeded a good prelate, although we cannot see that the new prince sustains the princely character quite so well as the old. Be this as it may, it would be downright burlesque to compare some of our bishops and archbishops with those who both loved and honored Petrarch for any other purpose than that of contrasting the new with the old in every essential quality, and thereby showing how wonderfully easy it is to please American catholics at the present day in the matter of princes of the church, and what a strange anomaly it is that the very classes who only a few brief years ago indignantly denounced, and finally extinguished Know-Nothingism in politics, now submit quietly, if not admiringly, to Know-Nothingism in religion in its most palpable and most degrading form!

No one could have a warmer or better friend than Cardinal Colonna was to Petrarch for more than a quarter of a century. For many years the generous churchman had the poet to reside with him, invariably treating him with all possible kindness and consideration. When Petrarch left him even to visit a friend he was impatient for his return, and when he left finally the good cardinal mourned after him as a fond parent would after a favorite son. Archbishop Visconti was scarcely less attached to him. Nor were these learned and good prelates merely willing to afford him an asylum—they were not merely anxious to have him with them for their own glory, or for the purpose of availing themselves of his learning and genius. Each did him every possible service. Thus, through the influence of one, he is elected canon of Parma in 1346; through the influence of the other he is made canon of Padua in 1349; and through the influence of both combined he is made archdeacon of Parma one year later.

In short, it was through the influence of Colonna and Visconti that three successive popes sent letters to Petrarch earnestly inviting him to visit them; nay, it was they—one or both—who first gained him the friendship of King Robert of Naples, the most enlightened sovereign of his time, who was so anxious to gratify the poet in every possible way that he had him crowned at Rome, as Laureate, in 1340.* If, in a word, it be remembered that while he received various preferments, not only were those in power in the church—its real princes—well aware of Petrarch's passion for Laura, a married woman, but also aware that he had two illegitimate children, John and Francesca, and aware, moreover, of his sarcasms on more than one of the popes, it must be admitted that if he

* One of Petrarch's most faithful biographers describes his coronation as follows: "Revêtu de la robe que le roi lui avait donnée, Petrarque marchait au milieu de six principaux citoyens de Rome, habillés de vert, et précédét par douze jeunes gens de quinze ans vêtus d'ecarlate, choisis dan les meilleures maisons de la ville. Le sénateur Orso comte de l'Anguillara, ami de Petrarque, venait ensuite, accompagné des principaux du conseil de ville et suivi d'une foule innombrable, attirée par le spectacle d'une fête interrompue depuis tant de siecles.—Ginguenè *Hist. Litt.*, t. 11, p. 360.

had been known to be an angel sent directly from heaven and required by God to transgress certain moral laws to make him seem human, the church could hardly have treated him with more benevolent indulgence. But, in order to appreciate this liberality to its full extent, it will be necessary to bear in mind, further, that at this time the church was the repository of all learning, the sole fountain throughout Europe of profane as well as sacred knowledge, and, moreover, the universally recognized chief source of influence and power.

True, there is abundant evidence that Petrarch lived and died a firm believer in the Catholic religion. We see proofs of the fact, even in his Latin memoranda, at the heads of his sonnets. Thus, for example, over one he writes: "I began this by the impulse of the Lord (*Domino jubente*), 10th September, at the dawn of day, after my matins.*

This reminds us of an interesting passage in De Sade's memoirs. "The pleasure of living his youth over again," says the Abbè, "meeting Laura in every line, of examining the history of his own heart; and perhaps the consciousness which, after all, rarely misleads authors, respecting the best of their works, induced the poet *in his old age* to give to his love-verses a perfection which has never been attained by any other Italian writer. If the manuscripts did not still exist, it would be impossible to imagine, or believe, the unwearied pains he has bestowed on the correction of his verses."

Yet in no poetry is art less apparent than in the sonnets of Petrarch; there is no other poetry whose charms the impressible reader is more disposed to regard, without asking any questions, as the results of sudden and irresistible inspiration.

But we find that our article has already exceeded the bounds we had prescribed for it. We cannot close, however, without presenting a few specimens of Petrarch's amatory

* "Petrarque," says Joubert, "n'etait ni un libre penseur ni un hérétique; c'était un catholique convaincu, regulier et même zélé dans les pratiques religieuses, mais exempt de superstitions. Ses sentiments modérés et eclairés qui se reconnaissent dans ses poésies se montrent surtout dans sa curieuse correspondance, qui a tant de prix pour l'histoire politique et littéraire du quatorzième siecle.—*Nouv. Biog. Gen.* Art. *Pétrarque.*

poetry for the benefit of such of our readers as may not hitherto have had an opportunity of reading even his most celebrated works. We think we cannot more appropriately introduce the few extracts for which we can make room than by transcribing Campbell's translation of Petrarch's description of Laura, sonnet cxxvi.:

> "In what ideal world or part of heaven
> Did nature find the model of that face
> And form, so fraught with loveliness and grace,
> In which, to our creation, she has given
> Her prime proof of creative power above?
> What fountain nymph or goddess ever let
> Such lovely tresses float, of gold refined,
> Upon the breeze, or, in a single mind,
> Where have so many virtues ever met,
> E'en though those charms have slain my bosom's weal?
> He knows not love who has not seen her eyes
> Turn when she sweetly speaks, or smiles, or sighs,
> Or how the power of love can hurt or heal."

This, it will be admitted, is above all praise. It were superfluous to point out its beauties; and yet even the bard of Hope has failed to render full justice to the original gem. In one of the volumes before us there is a fine engraved portrait of Laura. This, indeed, represents the lady as very beautiful—as much so, perhaps, as the pupil of Angelo could make it—still, it by no means carries out the poet's full conception of the beloved one.

Our next is a fragment from canzon xxiv., translated by Lady Dacre, its subject being the Fountain of Vaucluse, in that famous valley in which the author composed most of his sonnets, and which was endeared to him by so many tender reminiscences:

> "If so I must my destiny fulfil,
> And Love to close these weeping eyes be doom'd
> By Heaven's mysterious will,
> Oh! grant that in this loved retreat, entomb'd,
> My poor remains may lie,
> And my freed soul regain its native sky!
> Less rude shall Death appear,
> If yet a hope so dear
> Smooth the dread passage to eternity!

No shade so calm—serene,
My weary spirit finds on earth below;
No grave so still—so green,
In which my o'er-toil'd frame may rest from mortal woe!

Yet one day, haply she—so heavenly fair!
So kind in cruelty!—
With careless steps may to these haunts repair,
And where her beaming eye
Met mine in days so blest,
A wistful glance may yet unconscious rest,
And seeking me around,
May mark among the stones a lowly mound,
That speaks of pity to the shuddering sense!
Then may she breathe a sigh,
Of power to win me mercy from above!
Doing Heaven violence,
All-beautiful in tears of late relenting love!"*

We think these English lines, so full of pathos and melody, fully justify the estimate we have given above of the remarkable success of the ladies in their renderings of Petrarch's amatory outpourings.

It is difficult to select where there is such a profusion of beauties; it is particularly so when only a very limited space can be devoted to specimens, for it must be remembered that

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* S' egli è pur mio destino
(E' l Cielo in ciò s' adopra)
Ch' Amor quest' occhi lagrimando chiuda,
Qualche grazio il meschino
Corpo fra voi ricopra,
E torni l' alma al proprio albergo ignuda,
La morte fia men cruda,
Se questa speme porto
A quel dubbioso passo;
Che lo sperito lasso
Non poria mai in più riposato porto,
Nè 'n più tronguilla fossa,
Fuggir la carne travagliata, e l' ossa.
Tempo verrà ancor forse
Ch' all' usato soggiorno
Torni la fera bella e mansueta;
E là 'v' ella mi scorse
Nel benidetto giorno,
Volga la vista desiosa e lieta,
Cercandomi; ed, o pieta!
Già terra infra le pietre
Vedendo, Amor l' inspiri
In guisa che sospiri
Sì dolcemente che mercè m' impetre,
E faccia forza al Cielo,
Asciugandosi gli occhi col bel velo.

to do justice to the lover of Laura as a minstrel alone would require a volume. To discuss the merits of his three Triumphs (*Trionfi*) would require more space than we can devote to his whole works in this article. We must, therefore, pass over two of the "Triumphs," and confine ourselves to a few brief observations on the third, the "Triumph of Death." There is nothing in the whole range of amatory poetry more beautiful, chaste and affecting than this. It represents the beloved one returning from her victory over love. A black flag suddenly appears to her, followed by a woman of gigantic size in black apparel, and of threatening aspect, who stops the gloomy procession and strikes her. The blow she gives is death. The poet describes Laura in her last moments. She falls into a gentle slumber, in which she retains all her beauty. In the second part of the canzon she comes to him in a dream, holds out her hand, and invites him to sit by her side on the bank of a rivulet, under the shade of a beach and a laurel. She discourses with him on death, telling him it need be feared only by the wicked. Finally, he asks her a question which he admits would not have been proper before she had attained her present state of purity and bliss. The dialogue which ensues has been admired for centuries among nations the most dissimilar in their tastes, habits and feelings:

"She sighed and said, 'No; nothing could dissever
My heart from thine, and nothing shall there ever.
If, thy fond ardor to repress,
I sometimes frown'd (and how could I do less?)
If, now and then, my look was not benign,
'Twas but to save my fame, and thine.
And, as thou knowest, when I saw thy grief,
A glance was ready with relief.'

Scarce with dry cheek
These tender words I heard her speak.
'Were they but true!' I cried. She bent the head,
Not unreproachfully, and said,
'Yes, I did love thee; and whene'er
I turn'd away my eyes, 'twas shame and fear.
A thousand times to thee did they incline,
But sank before the flame that shot from thine.' "

The Abbé de Sade claims that this stanza would prove by itself that Laura was a married lady, and there are few intelligent, impartial readers who will not admit that he is fully justified in doing so. But whether the beloved one was married or not is a question of only secondary importance after the dust of so many centuries have accumulated on the graves of both mistress and lover. It is not for us of the present day to pass a harsh judgment on whatever relations may have subsisted between Petrarch and Laura, nearly five centuries ago. Still less should we feel justified in doing so when we find that there is really no evidence that Laura, whether married or single, was ever otherwise than chaste and virtuous. The world has now to do only with the results of Petrarch's passion for Laura. That these results have been a source of delight to millions in a long series of ages is universally admitted. Those who afford us harmless pleasure have a claim on our gratitude in proportion to the amount of that pleasure. If instead of awarding them that gratitude we pursue them to their grave, and try to exaggerate their frailties, or attribute to them frailties from which they were, perhaps, entirely exempt, then, in the minds of all good men who reason, we exhibit ourselves in a most odious light. If either Petrarch or Laura had any grave faults the world of their day was evidently very willing to overlook them, and think only of the virtues of both. Ought we of the present day be less generous?

It is because we think not that we have undertaken this discussion, and we shall regard our reward for doing so as ample if we can only induce a dozen persons now unacquainted with the lyrical poetry of Petrarch to examine its claims to admiration. Then, before long, we would take up the Latin poems of Petrarch, including his epic entitled *Africa*, feeling sure that, although these are scarcely referred to at the present day, many of our readers would thank us for calling their attention to some of the exquisite gems of thought which all who have adequately examined them readily admit they contain.

It is, however, the Sonnets of Petrarch which place him in

the first rank among the popular poets of the world—it is the story of Laura as told in those beautiful and melodious fragments that render his laurel crown as fresh and green to-day as when it was first placed on his brow by the common consent of poets and historians, kings, emperors, and popes.

ART. IV.—1. *The Sun, Ruler of the Planetary System.* By RICHARD A. PROCTOR. London. 1871.

2. *The Fuel of the Sun.* By W. MATTIEN WILLIAMS. London. 1870.

3. *Le Soleil.* Par LE PÈRE A. SECCHI, S. J. Paris. 1870.

4. *Le Ceil, Notions D'Astronomie.* Par AMADÉE GUILLEMIN. Paris. 1870.

CHIEF among the objects of human interest, through all the ages of man's existence, stands forth the glowing centre of our planetary system—that wondrous sphere which kindles the day and sets a limit to the kingdom of night—to which summer owes its glory, and winter its alleviation; whose fervent beams clothe the earth in its spring-tide vesture, lend their magical hues to the petals of flowers, and round the luscious globes of the fruit and the golden grains of the harvest.

Under its burning kiss the waters of the ocean rise in vapor, float on the wings of the wind over the land, and are showered down in vivifying rains, bringing forth a multitudinous life where all else would be the desolation of the desert. To its generous rays all light, heat, life itself is due. The grand forces and phenomena of the earth, from the overwhelming rage of the tempest to the silent fall of the snow flake, from the fierce flash of the lightning to the tender glow of the aurora, are alike the work of these strong beams.

Our opening eyes salute this mighty orb, rising in glory from his nightly slumbers; with gladness we behold his beams breaking through the gloom of the clouds; with regret we see him glide below the western horizon, laying a splendor of farewell on the evening skies. Of all objects of human contemplation, this regal orb stands forth as the most sublime—a source of admiration alike to the savage and the civilized—the supreme object of research in the noblest of the sciences—a sphere whose intense glow drowns the light of myriads of distant suns which gem the sky when the veil of night shuts out the solar splendor.

But there is an essential difference in character between the savage and the civilized admiration for this shining sphere. To the early nations, the solar orb became an object of worship—a great self-luminous deity, the lord of the heavens, and the beneficent ruler over the earth. The ancestors of the Aryan race—the forefathers of the civilized world—made the sun the prime object of their worship, weaving into intricate myths all its movements—the dawn, its strivings with the clouds, its setting, its victories and defeats, forming the woof of a varied web of theological conceptions.

All the mythologies of Europe rise from this well-spring of astronomical religion, the sun gods being at the basis of European paganism. In the palmy days of Greece, the Hellenic race worshipped, in their Zeus, Apollo, and other deities, the legendary deeds of the sun as handed down from their Aryan ancestors. While Hipparchus and Ptolemy were originating mathematical astronomy, their countrymen were worshipping, without knowing it, as their supreme god, the same grand object which these early scientists were observing as the supreme physical phenomenon.

In modern times we have got the sun out of our religions, and the earth out of our systems as the centre of the universe. Our planet has fallen into its native insignificance in scientific eyes; the sun remains the most interesting object in the visible universe, though it is now known to be but one of uncounted myriads of similar orbs, so immensely distant that their luminous beams, winging their way with inconceivable

swiftness, are years in reaching our remote sphere, keeping their secret intact for our eyes through all the perils of immeasurable space.

In seeking to give some rapid idea of the remarkable discoveries that have been made of late years in the physical and planetary relations of the central orb of our system, we will first glance at its exterior planetary relations, and close with a description of the new views concerning its surface. The planetary bodies are affected in various ways by their governing centre; by the heat constituent of its beams, to which all their surface forces are primarily due; by the actinic constituent of its light, without which no life could appear, and by its vigorous attractive force, which firmly binds its swift attendants in their ordained orbits.

To a correct measurement of these, particularly the latter power (it being the unit of all astronomical calculation), a close knowledge of the distance of the sun from the earth is necessary. This distance has not yet been satisfactorily determined, and the coming transit of the planet Venus is of peculiar interest to astronomers, as it will afford them the most reliable means of correcting their former measurements. There are several other methods of arriving at this determination, but none of sufficient precision to weigh against the sharp lines drawn by Venus across the sun's disc, twice in a century.

A close calculation has been made of late years of the observations of the transit of the last century, collated with results from these other methods, the supposed distance being reduced from 95,000,000 miles to about 91,370,000 miles, with a probable error of about 300,000. Sir John Herschel says that this correction in the value of the sun's parallax corresponds in value to the breadth of a human hair at one hundred and twenty-five feet, or of a sovereign at eight miles distance. This new figure as to the sun's distance will reduce his diameter to about 850,000 miles.

The rays which flow from the sun, and a minute portion of which touch the earth in their outward flight, are, as we have said, the chief moving agents of all the evolutions of na-

ture upon the terrestrial surface. Not only those evident changes which we have particularized, but the slow degradation of the solid surface which has been the chief agent of geological changes; the force of ocean currents in transporting material wearing away the surface, and, by diminished pressure, permitting volcanic eruptions; the laying up great reservoirs of coal and petroleum, and numerous other less apparent results, have proceeded directly from the incessant action of these beams through vanished myriads of years.

The amount of heat thus emitted by the sun is almost beyond our powers of conception. The beams poured down each hour on an equatorial square mile would melt 26,000 tons of ice. The heat which the earth receives in a year would, if equally distributed, melt a layer of ice 100 feet thick over the entire surface.* Yet to arrive at the total radiated heat of the sun, we must multiply this quantity by 2,138,000,000. All planets absorb but the 227-millionth part of this inconceivable emanation, the great ocean of which rushes through the space beyond our system with marvellous speed, to announce the existence of our solar orb to every star of the visible universe.† It has been calculated that if a cylinder of ice, 45 miles in diameter, were darted into the sun with the speed of light (180,000 miles per second), the amount of heat now emitted would be just sufficient to melt it, while the active temperature of the sun's surface would suffer no diminution.‡

A portion of the heat force thus emitted is stored up upon the earth in the forms of vegetation, which, hardened into coal, form the main force agency of the modern world. We now use what Professor Tyndall calls the sun of the carboniferous period.

Efforts are being made to replace the rapid consumption of this stored force by the employment of the active emanations of the sun. Ericsson and several French scientists are experimenting with what they denominate solar engines,

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* Herschel's *Outlines of Astronomy*. † *Le Soleil*, p. 275.

‡ Herschel, p. 231.

which they seek to move with the direct heat of the sun. Calculation proves this direct heat to be exceedingly vigorous, and if it can be economically employed, it may greatly increase our present sources of power. Proctor calculates that the force expended to produce a day's steady rain over an area equal to that of the county of Middlesex, England, would be equivalent to a mechanical power competent to raise 7,000,000,000 tons three miles high.*

Professor Tyndall draws a still more striking picture of this force, comparing the thundering vehemence of the fierce stone avalanche of the Alps with the soft descending of the fragile snow crystals. Yet to produce from aqueous vapor a quantity which a child could carry of the snow would consume a force sufficient to gather up the scattered blocks of the largest stone avalanche and hurl them back to twice the height from which they fell.

It is one of the most difficult problems of physical astronomy to discover the source of the vast heat thus emitted, and which has been flowing out with equal energy for uncounted millions of years. There is nothing on earth in consonance with such a condition, and we are forced to pure conjecture to arrive at some conception of its cause.

If the sun were a solid block of coal it would be burnt out in 5,000 years. If it were a heated globe, with the great specific heat of water, it would cool 15,000° in the same period.† We have on earth no sources of constant heat superior to these. Yet we know that no body can yield heat without a positive loss of force, and the question of the origin of the sun's intense and unceasing emanations remains open. R. Mayer ascribes it to a constant fall of cosmical matter on the solar surface, a fierce rain of meteorites whose concussion produces an evolution of heat. We will consider this theory further on, simply premising here that there is great probability of its being one of the elements of the problem.

Professor Helmholtz considers it due to a gradual contraction of the solar mass. According to his calculation a shrink-

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* *The Sun*, p. 405. † Meyer, *Dynamik des Himmels*, p. 10.

age of 1-10,000 part of its diameter would produce heat sufficient to cover its emissions for 2,000 years.* The evidence of a contraction from an original nebulous condition lends force to this theory, and each of these ideas, while having objections as yet unexplained, are yet very probable contributions to the unsolved question of the source of the solar heat.

Our sun is but one of millions of similar orbs which the telescope has revealed to us, and of myriads too inconceivably distant to reveal themselves to the utmost powers of optical instruments. Yet their light streams across these mighty intervals of endless space. They are tied by gravitation in bonds of intimate connection, and possess relative motions. The sun and his family of planets are thus drifting through space at the rate of 150,000,000 miles per year, and a like star drift has been observed in many of the stellar orbs, whole families of suns in certain cases floating on with equal speed in parallel lines. This is evident, for instance, in five of the principal stars of Ursa Major, and indicates a connection between suns resembling that between planets.†

But while bound to these sister orbs by the chains of equal attraction, the sun has a vast field of space under his own supreme dominion, an empire with a diameter of many billions of miles, peopled by numberless bodies, varying in size from the smallest meteorite to the size of the majestic planet Jupiter, all of which are his servants, and move in strict subserviency to his attraction.

His vigorous force spreads throughout this immense domain, drawing towards himself all its physical tenants, and causing them to rotate in orbits in conformity with their original speed. If any body starts from a state of rest to fall towards the sun from any distance short of infinity, it will inevitably be forced to assume an orbital revolution. If it fall from an infinite distance, its force of motion will exceed the sun's power of attraction, and it will pass again into infinity. This, of course, supposing that only the sun and the body existed,

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* Tyndall's *Heat as a Mode of Motion*, p. 443. † *Nature*, March 3, 1870.

and that the universe contained no disturbing elements to such a relation.

Mathematical astronomy readily solves this problem, and arrives at the speed of a body thus falling from infinity, and from less distances, and is thus enabled, by knowing the speed and direction of a body at any fixed distance from the sun, to calculate the shape of its orbit, and the maximum and minimum distances of this orbit from the centre of attraction. The great solar sphere, with a mass 315,000 times that of the earth, and an attractive vigor so great that a pound weight at its surface would weigh 14½ tons, while a man would weigh about 20,000 tons, grasps the huge bodies of the planets with a vigor sufficient to overpower their enormous *vis viva*, and force them to rotate in fixed orbits.

An increase of the earth's mass, if effective at all, would tend to increase the strength of this bond, and draw it yet nearer the sun. An increase of its speed, however, or a diminution of the sun's mass, would lessen the force of connection, the earth moving away from the sun. If this change were sufficiently great it would leave the sun forever. The earth's mean velocity, in its orbit, is now 18.2 miles per second. Were this velocity increased to a speed greater than 25.7 miles per second, the sun's attractive force would be negatived, and the earth move off, a free tenant of space. The same result would occur were the sun's mass reduced in the ratio of 1,414 to 1,000.

A body revolving in a circle just touching the sun's surface, would need a speed of 268 miles per second to keep from being drawn in by the intense gravitative force. At a speed of 378.9 miles per second it would just graze the surface, and return after proceeding outward to an indefinite distance. If the speed were increased beyond this, it would not return. This, then, is the speed a body would attain in falling from an infinite distance to the sun, and without aid or retardation from exterior influences.

The sun can control a body, at Neptune's distance, having a velocity of 4.7 miles per second, being 1-80th of its controlling power at its surface. At four times the distance of Nep-

tune, a body having a speed of 2.4 miles per second would break loose and pass off infinitely. A mass moving through space with the speed of an express train, 60 miles per hour, would be compelled to move in a closed orbit round the sun at any distance within 220,507,500,000,000 miles. At one half this distance, it would describe a circle round the sun.*

The sun thus sweeps space with its powerful grasp; lording it over an inconceivable domain, tenanted by a far greater volume of matter than, until lately, man had any just conception of. Besides the few great planets, and their humble companions the asteroids, thousands of cometary bodies wander at will through the realms of space, now bound to the sun, now grasped in their grand flight by some other sun, and torn forever from our system, for the mighty empire of our solar orb is limited by the attractive range of other suns, which lie in a broad circle round it. In addition to these visible masses there are innumerable myriads of meteorites, only seen when flashing through our atmosphere, yet probably far exceeding the planets in aggregate mass, and each rotating in its own fixed orbit round the sun.

With the foregoing brief description of the action of the solar orb upon its attendant bodies, we will proceed to a fuller consideration of the condition of its surface, as shown in the results of late astronomical observation. Within the last few years this has risen to be the most interesting problem in the science of astronomy, and the numerous discoveries made have given us a far more accurate idea of these surface conditions than would have been deemed possible a quarter of a century ago. These results proceed from the employment of four or five instrumentalities, of which the most important in this investigation are new to astronomical research. These are the telescope, the polariscope, the thermometer, the photographic camera, and the spectroscope. To these we may add the important agency of the moon, in causing eclipses, and thus allowing us to view the rim of the sun out of the glare of its intense radiance.

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* Proctor's *Sun*, p. 355.

In considering the results of this active research we will glance first at the most interior of observed solar conditions, and proceed outwardly. Thus the phenomenon of the solar spots presents itself first to our attention. These have been known since about 1611, being one of the earliest of telescopic discoveries, and have been closely studied. Galileo paid great attention to their movements, deducing from them the fact and the period of the sun's axial rotation.

The solar spots present themselves to the telescope as black, irregularly shaped, moving masses upon the sun's disc, their central portions being intensely dark, and bordered by a fringe of lighter hue. Some of them are of immense extent, one having been reported as measuring 143,500 miles wide, and they appear and disappear with a rapidity which, in connection with their great width, is significant of violent action at the sun's surface. From the observations of Dr. Wilson of Edinburgh, made in 1769, there is great reason to believe that these spots are really vast, cavernous depressions in the body of the sun, of which the dark nucleus forms the bottom, the lighter penumbra the sloping sides.

Sir Wm. Herschel considered this phenomenon as caused by openings in an extensive atmosphere which he conceived to surround the supposed solid body of the sun. He imputed the solar light to lucid fluids floating in this atmosphere, the spots to openings in which these fluids were swept aside, and the dark centres to the visible body of the sun. He carried this curious speculation to a consideration of the possibility of the dark inner surface being inhabited.* This idea is utterly irreconcilable with what is now known of the solar constitution.

Sir John Herschel advanced our knowledge of the spot phenomena by showing that they are chiefly confined to two zones reaching about 35° each side of the equator, the equatorial zone of about 16° width being nearly free.† The natural conclusion from this fact is that they are peculiar results of the axial rotation of the sun, analagous in their origin to the trade winds and oceanic currents on the earth. In

* *Philosophical Transactions*, 1801. † *Outlines of Astronomy*, p. 227.

fact they appear to strongly resemble the hurricanes or cyclones occurring in the zones of the trade winds. A motion of rotation, significant of some such fact, has in several cases been observed. Mr. Dawes saw one great spot make half a circuit in six days, while others moved still more rapidly, and there is reason to believe that they move sometimes with a speed of from 40 to 120 miles per second. This seems to indicate cyclonic movements on a magnificent scale, and with the most astonishing rapidity.

The next important contribution to our knowledge of the spots was made by Prof. Schwabe, of Dessau. For thirty-one years he watched the spots every day in which the sun was visible. The result of this long-continued observation was the discovery of a periodic variation in their numbers.* From the tables of this unwearied observer, Prof. Wolf, of Zurich, deduced a period of 11.11 years between two such seasons; also a period of 7.65 months, and a suspected one of fifty-six years.†

This short period is about that of the rotation of Venus, and the others are supposed to be closely connected with periods of the other planets. It is thus imagined that the attractive force of the planets has some unexplained agency in the formation of these spots.‡ Their periods were next found to be closely connected with the magnetic periods of the earth, the magnetic disturbances having a maximum corresponding with the maximum of sun spots. This might have been a mere coincidence, but a positive connection was unexpectedly proved by an event that occurred on September 1, 1859. This was fortunately observed by two persons, Mr. Carrington and Mr. Hodgson, thus removing all doubt of its real occurrence. It was the sudden appearance, within the area of a large group of sun spots, of two patches of intensely bright and white light, which, in an interval of five minutes, traversed a space of about 35,000 miles. Mr. Hodgson saw but a single brilliant star of light, of daz-

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* Proc. *Royal Astr. Society*, 1857. † *Le Ciel*, p. 65.
‡ *Jour. Astr. Society*, 1865.

zling brightness, illuminating the edge of adjacent spots. It lasted about five minutes, and disappeared instantaneously.*

The significant circumstances were that at the same time magnetic storms broke out in Europe and America, powerful earth currents were observed, constantly varying in direction and disturbing the telegraph wires; great auroras were seen at Rome, in the West Indies, and in the tropics within 18° of the equator (where they hardly ever appear), and even in South America and in Australia, a remarkable aurora being seen at Melbourne. At Washington and Philadelphia the telegraph operators received severe shocks, and at Boston a flame of fire followed the pen of Bain's electric telegraph.†

Thus the solar spots, orbital movements of the planets, and magnetic phenomena of the earth, seem closely linked together, though no progress has yet been made towards a theory of their connection. The late researches of De La Rue, Stewart, and Loewy, in which all preceding discoveries were collated and extended by a valuable series of photographs, resulted in the following conclusions: 1. The nucleus of a spot is at a lower level than its penumbra. 2. The solar faculæ (masses of brilliant matter adjacent to the spots) consist of solid or liquid bodies, suspended in a gaseous medium. 3. A spot, both nucleus and penumbra, takes place below the surface level. They believe that Venus specially influences the solar spots, and also that they are effected by the conjunctions of the planets.‡

Beyond the region of the spots the photosphere of the sun presents several phenomena. Among these are the so-called willow leaves of Mr. Nasmyth, being luminous, oblong objects, uniform in shape and size, and covering the solar disc in myriads, crossing each other in every direction. Many astronomers doubt the accuracy of this description, and consider the appearance to resemble rice grains, with dusky spots between their numerous interlacings.§

The appearance of a sun spot is always preceded by

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* *The Sun*, p. 203. † Herschel's *Familiar Lectures on Scientific Subjects*, p. 24. ‡ *Researches on Solar Physics*. § Herschel's *Fam. Lec.*, p. 88.

luminous, ridge-like faculæ, as if some vigorous internal force was upheaving the surface. In the midst of this disturbance a dark point appears. This rapidly grows, the penumbra bordering its edges, and a clear distinction between the nucleus and the penumbra being established. When the spot declines, this clearness is lost, a luminous cloud floats over the edges and projects into the spots, sometimes completely bridging them, and gradually they are obliterated by the advancing light. Often the most fantastic variations take place, and there are the strongest indications of vast disturbances of the sun's surface.*

Spectroscopic observation of the spots yields results indicating, in the case of hydrogen for instance, that it is in its normal condition adjacent to the spots, giving dark lines in the spectrum. On the edge of the spot the heat appears to decrease, as the hydrogen gives bright lines. Further towards the centre there appear evidences of pressure and high temperature. Still nearer the centre this pressure continues, but the temperature declines, and there appears to be a rapid down rush of the gas into the concavity of the spot. The lines of sodium, magnesium, barium, and other elements, have given similar indications of violent action, rapid motion, and remarkable changes of pressure.† Fr. Secchi has observed lines in the spots which he imputes to the presence of aqueous vapor.

We may mention here, among the elements shown by the spectroscope to exist in the sun, evidence of the gases of hydrogen, sodium, barium, calcium, magnesium, aluminium, iron, manganese, cobalt, chromium, nickel, zinc, copper, and titanium. But of late years the attention of astronomers has been drawn to a rapidly increasing series of new phenomena, whose interest eclipses that of the spots. These are what are known as the prominences, the chromosphere, and the corona.

The colored prominences were first observed during the total solar eclipse of 1842. They had been noticed before but misunderstood. In this eclipse the observers were surprised

* *Le Ciel*, p. 39. † *The Sun*, p. 238.

by rose colored prominences, compared by some of them to alpine peaks illuminated by the setting sun. In the eclipse of 1851 many of these were drawn, and showed sufficient resemblance to prove them real objects. Not only huge elevations, but lower sierra ridges, widely stretched round the disc. One great prominence was so brilliant as to be visible for five seconds after the end of total eclipse. Mr. Hind speaks of a long range of rose colored flames, seemingly affected by a tremulous motion, their brilliant, rose-red tops fading away along the moon's limb into what appeared a bright narrow line of deep violet tint.*

In the total eclipse of 1860, the attention of astronomers was specially directed to this interesting feature. A new feature was here introduced, photographs being successfully taken by Father Secchi and Mr. De la Rue. In these the prominences were plainly shown. The observations of the former induced him to form the following conclusions.

He considered the prominences as real solar appendages, being collections of very brilliant luminous matter, having strong photographic activity. Many were photographed that could not be seen, their rays, perhaps, being all actinic. A zone of the same material as the prominences enveloped the whole sun, from whose surface these flame-like masses sprang.† Some of the latter were of immense height, reaching up to 80,000 miles above the surface, and if their bases lay below the visible edge some of them may have been 130,000 miles high.

During the great eclipse of August 18th, 1868, a more powerful instrument of research was applied. The powers of the spectroscope were now well known and largely developed, instruments of great excellence being in use. Some very good photographs were taken, but the spectroscopic results were the most interesting. Lieutenant Herschel describes, in lively terms, his excitement in turning this new instrument of re-

* La plupart des savants les regarderent comme des flammes, ou comme des nuages. *Le Soleil*, p. 179.

† Compte's *Rend.* July, 1860.

search upon the mysterious prominences, particularly when three vivid lines met his anxious gaze; red, orange, and blue.

The appearance of these lines was indeed highly significant. It may be well to give a hasty description of the character of spectroscopic observation to render the meaning of these results more clear to those readers who are unacquainted with its principle of action. It has long been known that the colored spectrum, into which the sun's light is extended by the prism, is crossed by numerous dark lines, visible when the spectrum is lengthened and narrowed.

Further experiment proved that a solid or liquid incandescent body gave a continuous spectrum, and that an incandescent gas gave a spectrum of bright lines separated by dark spaces; while the light of a solid body, if passed through a gas, gave a spectrum crossed by dark lines in the exact positions occupied by the bright lines of this gas when incandescent.

The necessary conclusion was soon reached. Each gas had the power of giving out special lines of its own, and of absorbing these same lines from the light emitted by another body. Instruments formed on this principle thus gave observers the power to declare whether a light-giving substance was a gas, or in the solid or liquid state; and, if the latter, whether its light passed through gases in a cooler condition; and finally enabled them to name these gases if similar to any of our earthly elements. It was by this means that the elementary constituents of the sun, as already given, were discovered.

The bright lines, then, of the prominence at once disproved several ideas of their constitution. Had they been self-luminous solar mountains, a continuous spectrum would have appeared. Had they been bodies reflecting solar light, their spectrum would have been crossed by dark lines. The sole remaining theory was that they consisted of glowing, gaseous matter.*

What was this gas? This was the next object of discovery. The three lines seen by Herschel were increased by other ob-

* *The Sun*, p. 279.

servers to five, six, and nine lines respectively. We will not give their ideas relative to these lines, as we possess more reliable later information. Mr. Jansen was struck by the brilliancy of some of them, and by the general splendor of the prominences.* As he looked, the idea occurred to him that these lines might possibly be seen when the sun was not eclipsed. In this idea lay the germ of the remarkable progress since made in solar astronomy. The next day he applied it successfully to the sun. "I have experienced," he said, "to-day, a continuous eclipse."†

Mr. Lockyer, in England, had meanwhile been studying the edge of the sun with the hope of attaining a similar result. He was incited to this by Dr. Huggins, whose examination of a star that suddenly appeared, in May, 1866, enabled him to declare that its light was due to an outburst of glowing hydrogen, along with which was plainly visible the native spectrum of the star. This rendered it possible that the definite bright lines of a gas might be made visible even through an intenser under-light, and gave Lockyer his cue to disperse the diffused atmospheric light of the sun, and thus give a special advantage to the unchanged lines of the prominences. The effect of such dispersion on these lines is simply to separate them from each other, while the spectrum of the daylight is rendered so faint as not to interfere with their observation.

It needed then but the possession of a sufficiently delicate spectroscope to realize this important idea. This he succeeded in obtaining, and his account of the success of his experiment was read before the French Academy just five minutes before the reception of Mr. Jansen's account of his having made the same discovery.‡

This new method of observation gave astronomers an unexpected opportunity of observing at their leisure phenomena which they had heretofore only been able to perceive during the fleeting moments of an eclipse. The research has since

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* He writes: "Immédiatement après la totalité, deux magnifiques protubérances ont apparu; l'une d'elles, de plus de trois minutes de hauteur, brillait d'une splendeur qu'il est difficile d'imaginer."

† *The Sun*, p. 280. ‡ *American Journal of Science and Art*, Jan. '69.

been diligently prosecuted, with a rapid improvement in modes of observation, and constantly increasing information. These new modes have given astronomers the power of seeing the prominences displayed in their full shape and size, and of observing their every transformation; while their connection with the solar spectrum enabled them to settle positively the true position of the bright lines.

It has thus been satisfactorily proven that the red and blue lines correspond exactly with the C and F lines of hydrogen. Hydrogen, at a glowing heat, was thus shown to be one constituent of these huge vaporous masses. Mr. Lockyer was soon able to confirm the views of those who held that the sun is wholly surrounded by a layer of matter similar to the prominences. This he named the chromosphere. It is doubtful if this be a true solar atmosphere. Its uneven limit resembles rather a region of flames or clouds. It is gaseous, but so are the prominences. Proctor thinks it a gaseous matter suspended in the true solar atmosphere, driven upward by some vigorous power, expanding in the then upper atmosphere, and slowly sinking towards the surface.

It is within the chromosphere and certain prominences that spectroscopes of high dispersive power exhibit remarkable evidences of cyclonic movements taking place in the solar atmosphere. Professor Young has observed the F line of hydrogen greatly displaced, while the C remained unchanged, a fact which shows that we are as yet far from a solution of all the mysteries of the surface condition of the sun.

Dr. Zöllner has systematically applied Dr. Huggins' method of observing the full shape of the prominence (already adverted to) with interesting results. He saw the prominences in three distinct colors, corresponding to the three lines of their spectrum. The red and blue images did not agree with the yellow, and the latter was only intense near the sun's edge. He supposes it to come from a gas of greater specific gravity than hydrogen, and, therefore, occupying a lower level. He published figures of these prominences, some resembling clouds, others eruptive in form. Some of the latter

seem to be hurled in a vertical line to a great height, then to widen at the top and sink slowly downward.*

Professor Respighi has been yet more systematic, taking daily views round the sun's limb. He considers the prominences solely eruptive, and usually connected, but not identical, with the faculæ. Only low jets appear over the spots, and near the equator and poles they are few and small. He noticed one that appeared to rise to a height of 160,000 miles, Their formation begins with a rectilinear jet, bright and well defined. This rises to a great height, falls over like the jet of a fountain, and slowly sinks, often spreading out like the head of a vast tree.

He gives the following theoretical conclusions from his observations. He considers the photosphere as the surface of an incandescent liquid mass, by whose weight various gases, especially hydrogen, are confined in the interior of the sun at an elevated temperature and under a tension that reduces their density nearly to that of the confining liquid stratum. These gases are not in stable equilibrium, and might thus be pressed upward with great force, bursting through the surface and rising with a velocity depending on the depth from which they come, spreading, from their enormously expansive condition, into vast clouds, and then slowly falling into the chromosphere.†

Thus, there have been successively discovered in the sun, its photosphere, a brilliant surface, marked by the "willow leaves," "rice grains," and "pores" of different writers; its faculæ, ridge-like bodies of peculiar brightness; its spots, dark, cyclonic depressions in the surface; its chromosphere, a layer of luminous gases several thousand miles in thickness; and its prominences, apparently mighty outbursts of glowing gas, incessantly occurring and extending upward to a great height, from which they slowly fall back, like a dense smoke shot vertically upwards, and descending in widely spreading masses through the air.

Still beyond these lies another phenomenon, of equal in-

* *Jour. Science and Art*, Sept. 1869. † *Amer. Jour. of Science*, Feb. 1871.

terest—in fact, at present of greater interest—since it can only be seen during a total eclipse, while all the above-mentioned phenomena are now visible at any period in which the sun is shining. This is what has been named the corona, that brilliant spectacle which has always been the great feature of eclipses, extending like a crown of glory round the moon when that opaque body has completely covered the glowing disc of the sun.

It is not visible while a single ray of sunlight remains; but, as the moon glides on, finally extinguishing the sun's last beam, it leaps out with startling suddenness, and a broad expanse of white light, very bright near the moon's edge, but gradually dimming outward, extending in rays whose outer limit cannot be defined from the surrounding space. It is described by some as of a faint red hue near the sun, then of a pale yellow, then white. This phenomenon was known to the ancients, but it, like all the other solar aspects, has excited close attention only in modern times.

In the eclipse of 1842, the corona was very brilliant, and seemed agitated or flickering. Baily had imagined that it would not be more luminous than the faint, crepuscular light which sometimes occurs in a summer evening. He was, therefore, somewhat astonished at the splendid scene that suddenly burst upon his view. Struve says the light was so bright that the naked eye could scarce endure it. Later observations and photographic results give to the coronal light a quadrilateral aspect, instead of the circular shape it was supposed to have. This figure is produced by an extension of the light over the four arcs between the equator and the poles.

Herr Grosch speaks of the corona in the eclipse of August, 1867, as of a white color, growing faint outwardly, not radiated itself, but appearing as if rays penetrated, or rather ran over it, in symmetrical pencils. These rays had a more bluish appearance than the light of the corona itself, and might best be compared to those produced by a great electro-magnetic light. In the coronal light appeared several dark curves.*

* *Student*, March, 1869.

In the eclipse of 1868, the corona was greatly extended in certain directions, and crossed by a curved ray of intensely white light. It was the publication of this fact that probably gave rise to the curious delusion at that period that a ray of magnetic light was advancing from the sun towards the earth, full of fiery intentions towards this mundane sphere. In this latter eclipse, polariscopic and spectroscopic analysis was applied to the corona.* The first was without satisfactory result; but the spectroscope of Lieutenant Tennant gave a faint, continuous spectrum.

In the American eclipse of August, 1869, Prof. Pickering saw a faint, continuous spectrum crossed by three lines, while Prof. Young saw a gaseous spectrum of three bright lines. This difference is explained as caused by a difference in width of slit of the spectroscope. Prof. Young noticed a close agreement between the coronal lines and those observed in the spectroscopic examination of the aurora. He considers the corona to be simply an electric discharge, varying with great rapidity, as in the case of the aurora—in fact, that the corona is a permanent solar aurora.

In the American eclipse, the corona had not the brilliance observed on some other occasions. It is described by Prof. Eastman as resembling the pale light in the train of a meteor, the portion around the sun being a mass of nebulous light, while the outer portions were radiated. Gen. Myer, whose observations were made from the summit of White Top Mountain, near Abingdon, Va., 5,530 feet high, thus greatly avoiding atmospheric interference, describes the spectacle presented in glowing terms.

To the unaided eye the vision was magnificent beyond description. At the centre stood the intensely black disc of the full moon, surrounded by the aureola of a soft bright light, through which shot out, as from the moon's circumference, straight, massive, silvery rays, to a distance of two or three diameters of the lunar disc; the whole spectacle showing as upon a back-ground of diffused rose-colored light. The

* *Le Soleil*, p. 165.

silvery rays were longest and most prominent at four points of the circumference, giving the corona a quadrilateral aspect. There was no motion of the rays.*

The efforts to photograph during this eclipse were more successful than any previously made, Mr. Whipple obtaining several good negatives in which the quadrilateral shape of the corona plainly appeared. Mr. Brothers, in his photographic experiments during the last total eclipse, found the light of the corona to be considerably more active than had been supposed. He found eight seconds' exposure sufficient to produce on the plate an effect of light extending at least one and a half millions of miles beyond the moon's limb.† In fact, no outer limit to the corona has been established. These later photographs have shown that great gaps or rifts break the continuity of the corona, some of these dark openings extending nearly to the moon's limb.

Professor Young made in the American eclipse a discovery of great interest, all doubt of which has since been removed by a similar observation made during the last eclipse. This was the discovery at the base of the chromosphere, and, of course, in immediate contact with the photosphere, of a thin layer in whose spectrum the dark lines of the solar spectrum were all reversed. He noticed them gradually fading out as the solar crescent grew narrower, and at the instant that the moon covered the whole photosphere the field was at once filled with brilliant lines, which suddenly flashed into brightness, fading out again in less than two seconds, and apparently occupying the exact positions of the dark lines.‡

The significance of the fact given is this. The solar spectrum is produced by the light of an intensely hot photosphere, which shines through a cooler atmosphere occupied largely by the vapors of various elements, which on earth exist only as solids. These stop certain of the rays, causing black lines in the spectrum. He had apparently then seen the light of the photosphere unfiltered by these atmospheric vapors, and found

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* *Naval Obs. Report*, p. 150. † *Nature*, Feb. 23, 1871.
‡ *Franklin Institute Journal*, Feb., 1871.

it to consist of the same elementary substances in an intensely heated condition.

Numerous theories have been advanced in explanation of the corona. Those attributing it to a lunar atmosphere, to diffraction of the solar rays in passing the moon, and to action of light on the earth's atmosphere, all seem to be disproved by the results of photography, which seem to show conclusively that it is an appendage of the sun. If so it is a phenomenon of the most imposing character, compared with whose volume that of our earth, and even that of the sun itself, sink into insignificance. The inner radiance which incloses the sun on every side indicates a luminous region of vast extent, while the problems suggested for our consideration in the aspect of this region, and by the physical state of the matter distributed through it, are of the most interesting description. Proctor hypothesises on its origin as follows. He ascribes it to countless millions of meteoric bodies which rotate round the sun, probably so thickly aggregated as to form a cosmical cloud. It is known that such meteorites exist in incalculable numbers, the earth encountering every year, in its movement round the sun, more than a hundred systems of meteors. Each of these systems appears to consist of a ring of matter, rotating round the sun, and composed of innumerable fragments of solid matter. The earth besides meets myriads of meteors not yet associated with any system. Every year we encounter 2,700,000,000 visible to the naked eye, while, if we include telescopic meteors, the number is calculated at 146,100,000,000.

Yet the earth traverses but a narrow line of immeasurable space. Analogy teaches that they occur in equal quantities in that portion of space unoccupied by the earth's orbit, there being millions of millions of such systems for every one known to us. Their lately proved association with comets adds greatly to this probability, and shows that the perihelise of their excentric orbits closely approach the sun.

The conclusion is that these innumerable meteors, whose orbits are closely grouped round the solar orb, and to whose continual fall into this orb Mayer attributes its heat emis-

sions,* must form a cloud of moving matter, incandescent or vaporized by the intense heat, their dense aggregation decreasing but gradually to a long distance from the sun. Between these moving and possibly colliding particles intense electric action might take place; and there is reason to believe that in an eclipse of the sun they would form round him an aureola of splendor.†

Such a hypothesis seems to necessitate a faint luminousness still more distant from the sun, which should be visible after his setting. Our author finds this in the zodiacal light, the annual variation in this light being in consonance with the meteoric variations. One fact certainly seems to closely connect the corona, the zodiacal light, and the aurora, and this is the close connection, if not identity, of the spectral lines of these three distinct phenomena.

Whatever may hereafter be shown to be the origin of the aurora will possibly aid in the explanation of these solar mysteries. It is known now to occur far above the formerly supposed limits of the atmosphere, and may possibly be an electric excitation in cosmical matter occupying exterior space.

Our knowledge of the sun has undoubtedly greatly increased of late years, through the numerous investigations above mentioned; yet, if we seek to deduce from them a general idea of the solar constitution, we find ourselves greatly in the dark. We are simply increasing the complexity of conditions, and rendering the problem more intricate as we approach a knowledge of its true elements.

There is no parallel in the conditions of matter on the sun and on the earth. Metals which to us exist only as solids or liquids are present in the sun as glowing vapors. Gases which no powers at our command can liquify may exist under the enormous pressure of the sun's interior as liquids, or even solids. On one hand an extreme temperature volatilizes our most rigid elements, perhaps dissociated substances which we consider elements. On the other hand, an immense pressure,

* *Heat as a Mode of Motion*, p. 438. † *The Sun*, pp. 364–8.

at no great distance below the photosphere, may liquify or solidify our so-called perfect gases.*

It is now known that the idea that incandescence or whiteness of flame is due only to solid particles is no longer tenable. Frankland has shown that sufficient pressure brightens the faint line of burning hydrogen, and that its spectrum may thus become continuous. Thus all our reasoning as to the solidity of the sun's photosphere is negatived. So we recognize that the fancied limit to rarefaction of gases has been placed too low, and that there may possibly be no limit to atmospheric extension.

In the sun, also, we must consider motions far more rapid than any we experience. The effect of a moving or falling speed of one hundred miles per second is beyond our conception. The temperature and pressure in the sun, their effect on gaseous diffusion, and on the connection between the three states of matter (now known to have no real boundaries), whether any solidity occurs, the existence and extent of combustion, whether it resembles or differs from terrestrial combustion, etc., are all unknown or unfamiliar matters to us.

We know not whence comes the light of the continuous spectrum seen by Prof. Young, whether from a surface or a great depth of matter. We know not whether the intensity of light is due to an intensely glowing surface, or to the aggregate effect of a deep layer of glowing matter.†

These are a few of the difficulties which arise in our study of the solar conditions. We have, it is true, attained some useful knowledge of its superficial indications, yet all our explanations of these are as yet provisional, and our information inexact; and at best we can claim to have made but a step forward toward the solution of that grandest problem of the sciences.

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* *The Sun*, p. 380.

† *The Fuel of the Sun*, p. 76.

ART. V.—1. *Histoire de la Chimie.* Par M. HOEFER. Paris. 1842.

2. *Des Sciences Occultes.* Par EUSEBE SALVERTE. Paris. 1843.

3. *Histoire des Sciences Naturelles au Moyen Age.* F. A. POUCHET. Paris. 1858.

4. *History of Chemistry.* By THOMAS THOMPSON. London. 1830.

OF the amount of misapprehension and derision which present achievement is ever ready to bestow upon past preparation, alchemy has always received its full share. We can imagine the glittering butterfly saying, as it hovers over the remains of its chrysalis, "What an unsightly, shapeless thing indeed! I certainly can have no connection with it, much less be its offspring." So modern chemistry, in the plenitude of its importance and certainty of its methods, disdains descent from groping alchemy. The chemist in his spacious laboratory, aided by all the apparatus suggested by ages of experience, performs his operations, sure to yield him a rich return, smiles to think of the poor alchemist, toiling in his smoky cell, lured by the hope of securing a substance which can transmute base metals into gold. The present is eminently a practical age. The philosopher's stone is sought not in the crucible and retort, but in the feverish marts of trade. No romance clings now to its pursuit. Midas has more followers than ever, notwithstanding the length of his ears. The sands of Pactolos have long since been scraped up, and converted into solid ingots.

This spirit, that would "coin one's heart-blood into drachmas," is not more justly chargeable to the age characterized by the "delusion" of alchemy than to the present. That the search for the *lapis philosophorum* as a means of acquiring

wealth, or for the *elixir vitæ* as the renewer of life, was the main object of the alchemist, is, to say the least, doubtful. We cannot thus explain this enthusiastic and indefatigable pursuit, extending through many centuries, and attracting all the minds of greatest energy, piety and learning, including such men as Albertus Magnus and Roger Bacon. Nor was the search for such a stone or substance so chimerical as is often represented. The testimony of Lord Bacon is highly important if not conclusive upon this point, whose marvellous insight and wisdom such a subject could not escape nor deceive. He says: "The work itself I judge to be possible, for we can conceive that a perfect good concoction or digestion or maturation of metals will produce gold."* A delusion that has embraced centuries, and deceived all the leading minds of those centuries, must be the most remarkable on record. A pursuit which reached its acme in Egypt in a state of civilization not inferior to any the world has ever seen, to which state it contributed as much as even modern chemistry has done to the present, and which has brought us from the "dark ages" such discoveries as Greek fire, gunpowder, nitric and sulphuric acids, and the art of distillation, certainly deserves to be ranked as a science. Many writers, struck by the absurd pretensions of some of the votaries of the hermetic art, the imposture of others, and the apparently meaningless jargon of some of their writings, have found subject only for amusement and ridicule in the whole affair, and have thus contributed much to the existing state of misapprehension. Thus they find some of the more enthusiastic devotees of the art claiming for it an origin coeval with man. Tubal-cain, "an instructor of every artificer in brass and iron," is numbered by them among its founders. The theory is also found of the propagation of metals by male and female, after the analogy of the animal and vegetable kingdoms. Mercury is regarded as the seed of the metal which, deposited in the earth, in a period of 1550 years, produces gold, or in a less time cheaper metal. According to Sandivogius, water is the

* *Nat. Hist.*, Vol. X., p. 160.

primitive source of the metals. He says: "The first matter of metals is humidity of the air mixed with heat. The generation of metals is this: the four elements, in the first operation of nature, do by the help of the archeus of nature distill into the centre of the earth a ponderous or heavy vapor of water, which is the seed of metals." We read of the seductive amours of the metals under the symbols of Sol and Venus, for instance, meaning simply a union of copper and gold.

If the object of language be to conceal thought, many of those writers succeeded admirably. If they did not possess the philosopher's stone, they certainly possessed the faculty of writing volumes upon it without disclosing the secret. It has also been found that those who claimed to have amassed wealth by the aid of the mystic art, as Jacques Cœur, minister of finance to Charles III., were open to the charge of having debased the gold currency. The same was suspected of kings John, Philip the Fair, and Edward II. of England. Hoefer remarks: "It was in those epochs in which this pretended science most flourished in certain states that the most numerous frauds upon the coinage were discovered."* In other words, these unscrupulous men had recourse to the popular faith in alchemy only to hide their avaricious schemes, and had not the least claim to be ranked among its disciples. To form an opinion of the science from such facts as these is to take a narrow view of the whole subject. The truth lies deeper. It is easy to collect a dish of the beautiful foam, but the first breath of inquiry dispels it to nothingness. To find the pearl which is hidden beneath is a sterner as well as more remunerative task.

All authorities point to Egypt as the birthplace of alchemy, where, under the denomination of the Sacred Art, it achieved its first and grandest triumphs. The invention of the art is ascribed to Hermes Trismegistus (thrice-great), and hence it is called the Hermetic art. He is supposed to have been one of the first kings of the ancient Egyptians and inventors of the useful arts, hence deified and worshipped as Thoth, or the

* *Histoire de la Chimie*, t. i, p. 417.

Ibex-headed Hermes. He is also represented upon their monuments with a human body surmounted by a head of the sacred bird. He afterwards became an object of veneration to the Greeks under the name of Mercury Trismegistus. He was also regarded by the alchemists as the author of the Smaragdine table, which they supposed to have been graven upon a plate of emerald with a point of a diamond, and concealed in the depths of the great pyramid of Gizeh. But Cuvier is of opinion that it was composed as late as the 7th century.* The term *sacred* art describes its character as possessed and practised only by the priests and initiates of Thebes and Memphis, to whom was confined all the knowledge of the age. Their operations were shrouded in the deepest mystery, and conducted only in profound secrecy, in the recesses of the temples and depths of the pyramids. The initiate pursued his researches in silence and darkness through the colonnades of the temples, with his finger upon his mouth, and pronounced the terrible vow of secrecy under penalty of death.

To increase the mystery with which all the experiments of the alchemists were enveloped, a symbolic language was employed to represent all substances and operations. These symbols are believed to be the origin of the hieroglyphic writings of the Egyptians, some of which came down to us, somewhat altered, as the signs of the seven planets. They were also engraven upon the fronts and painted upon the windows of the religious edifices of the middle ages, remains of which may yet be seen in Westminster Abbey and Nôtre Dame.

In the first outlook upon the science we see it marked by two strikingly opposite characteristics which it retains to the last, viz.—the wonderful value of the facts and discoveries, and the complete worthlessness of the theories. There can be distinguished three kinds of research—the philosopher's stone, the elixir vitæ, and a sort of spiritual philosopher's stone—the soul of the world. The term philosopher's stone does not apply to a material entity, but on the one hand it emanates from supernatural power and operates under the

* *Histoire des Sciences Naturelles*, t. 1, p. 371.

most mystic influences; on the other it is a simple body endowed with one fundamental property.* The search for the elixir vitæ was a natural corollary of that for the philosopher's stone, for wealth without health is of little value. In order to increase the pleasures and length of life they sought the panacea or universal elixir of life; or, in other words, the liquid philosopher's stone. This arose from the high conception which they had formed of that agent in supposing it capable of separating the pure metal from its alloy, and hence inferring that it ought to have the same property in regard to the morbific agents which affect the human organism.†

Undismayed by such researches, the enthusiasm of some of the devotees of the art led them to seek to penetrate still farther into the arcana of nature, like her to become the medium of divine agency, and like Prometheus to bring down the fire of the gods from heaven. Spurning their habiliments of clay they strove to enter into communication with spirits, good or bad, according as piety or perversity predominated, and to identify themselves with the "Soul of the world."‡

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* Pouchet, *Histoire des Sciences Naturelles au Moyen Age*, p. 123.

† Cuvier, *Histoire des Sciences Naturelles*, t. 1, pp. 573, 574.

‡ This spirit finds appropriate utterance in the words of Willis's "Dying Alchemist," as with his expiring breath he pours forth his undying desire to unlock all the mysteries of the material and spiritual worlds:

"Earth has no mineral strange—
Th' illimitable air no hidden wings—
Water no quality in covert springs,
And fire no power to change;
Seasons no mystery and stars no spell,
Which the unwasting soul may not compel.

"Oh! but for time to track
The upper stars into the pathless sky—
To see th' invisible spirits, eye to eye—
To hurl the lightning back;
To tread unhurt the sea's dim lighted halls,
To chase day's chariot to the horizon walls."

In the poem, as in fact with thousands of these ambitious spirits, d closes the scene upon the desire unfulfilled, the mystery unsolved.

The science of the Egyptian priests was not confined alone to the operations of metallurgy, but was a universal science, embracing within its compass all the practices of mysticism, yet having for its point of departure facts and observations. The Chaldeans, the Magi of the East, from whom the Greeks derived the term "magic," and by whom they were instructed, were among the earliest possessors of the art. It also holds a prominent place in the traditions of the Hebrews. Many of its secrets were doubtless communicated to Moses by Pharoah's daughter and the priests of Egypt. The Vades also contain many magical writings, and the practice of magic was known to the Druids of Great Britain, and to Odin and the priests of Scandinavia at an earlier period than to the Greeks and Romans.

The universality and antiquity of the practice of magic, or the occult science, is ably illustrated by Salverte,* by a large number of interesting facts drawn from a great variety of sources, and arranged mainly to maintain this thesis—that all their apparent miracles which cannot be referred to adroitness or imposture are facts of this secret science—real experiments in physics.

The sole aim of the Thaumaturgists, or wonder-workers, being to gain power and retain their influence over the people, they also added artifice and incantations to their real knowledge, in order to excite the imagination and divert attention from their secret processes; a practice connected with oracles, enchantments, and impositions in all ages of the world. Yet in the remarkable trials of skill between the Thaumaturgists themselves, these evidently could have had no place. In the disappointment of defeat and exultation of victory they were alike sure to conceal their secrets from the astonished spectators. Death to one or both of the parties was the inevitable result of disclosure, or of interference by one of the initiated with the works of another. In that immortal collection of Eastern tales,† which cannot entirely be attributed to the

* *Des Sciences Occultes, ou Essay sur la Magique.* Paris, 1843.

† *Thousand and One Nights.* Night 4th, vol. 1, p. 318.

workings of an uncontrolled and fervid imagination, we read of a female magician, who interfering with the enchantments of one of the evil genii, a terrible conflict ensues, in which although the enchanter is finally destroyed, the maiden also falls a victim to his arts. The fact that the alchemists always chose their own location for the exhibition of their powers is evidence of their dependence upon mechanical contrivances and chemical preparations.

Possessing no comprehensive theories by means of which to associate their experiments, each was an isolated fact, which could be performed only by repeated reference to their books of prescriptions, and by extended secret preparations. At length, all being in readiness, the populace were admitted to the temples to an entertainment unrivalled by modern exhibitors. Greeted with flashes of lightning and peals of thunder, followed by darkness and silence, the spectators were suddenly raised to a giddy height, and as suddenly sunk to gloomy depths, while about them appeared fiery serpents and grim monsters, followed by the shades of departed ancestors; shrieks and moans resounded in their ears, dying gradually away in the distance; voices addressed them from the solid walls and columns, and these withdrawing disclosed, in distant perspective, gorgeous palaces and gardens filled with moving figures of awful aspect, the very dwellings of the gods.

The influence of these spectacles in riveting that of the priesthood upon an ignorant populace is incalculable. These effects, and many others even more marvellous, are attributed by Salverte, with great accumulation of evidence, to the knowledge which the ancients possessed of what are so often regarded as the achievements of modern mechanics, optics, chemistry, etc. That their mechanism was carried to a point of perfection not attained in modern times is shown by the difficulty experienced in raising one of the Egyptian monolithes, which they erected in vast numbers. Modern travellers have remarked in the remains of the temple of Ceres the grooves and niches for pulleys by which the movable floors were transferred, with their occupants, to different portions of the temple "as if by magic."

The wooden dove of Archytas, a flying chariot capable of being directed at will by the inventor, and a balloon, carrying a man, are ancient inventions in the art of flying, which has never ceased to be an aspiration of man, and which we are certainly not nearer realizing than the ancients. In later times, speaking heads were invented by Albertus Magnus, and a brazen automaton, in the form of a man, which his pupil, Thomas Aquinas, destroyed in his astonishment. Pope Sylvester II., who occupied the papal chair from 991 to 1003, was also accused of magic for having made a speaking head of brass. And the accusation was just if we consider magic as the result of science concealed from the multitude.* The famous statue of Memnon, breathing melodious sounds when struck by the beams of the rising sun, is spoken of by the historians of the period as the result of pure science.

In optics we find the so-called miraculous effects produced in the temples, the result of the use of mirrors throwing magnified and reversed images, and in certain positions intercepting the light, in a manner analogous to polarized light. Thus they produced the wonderful effects of the phantasmagoria, and the diorama, and, by the use of the concave mirror and double lenses, of the magic lantern. It is easy to imagine the effects of these appearances upon the minds of those unacquainted with the means by which they were produced, especially when accompanied by the tricks of ventriloquism in which the performers were expert. Buffon admits the probability of mirrors being used in the port of Alexandria to discern distant ships, but they were doubtless employed long in the temples before they were devoted to this practical use, for nothing was expected from the occult science but the art of working miracles.†

These explain also the Nekyomantion to which the bereaved repaired in order to behold the shades of the departed. Here also notice the fact that this could be done only in a certain locality devoted to the purpose of recalling the dead. It is related of the Emperor Basil of Macedon that, grieving

* Salverte, *Des Sciences Occultes*. Paris, 1843. † Salverte.

for his lost son, he was permitted to see him fully arrayed upon horseback, but when he rushed to embrace him the apparition vanished. We read in the Arabian Nights of a tube about a foot long and an inch in diameter with a glass in one end, and whoever looked into it could see whatever he pleased. Allowing for the exaggeration of the eastern imagination, have we not the germ of the telescope or the opera-glass at least? When Xerxes opened the tomb of Belus at Babylon, he found the body of the king inclosed in a glass case partly filled with oil into which however much was poured it never rose above a certain level. The principle of hydrostatics are also applied to perpetual lamps.

The use of alcohol extends to the remotest times. In an ancient sacred book of the Hindoos, in which are collected the doctrines of remotest ages under the name of *Kea-soum*, mention is made of the distillation of spirits. Aristotle remarks that art had procured oil from common salt, which may easily imply hydrochloric acid, as sulphuric acid still is known under the more common name of oil of vitriol.

The ordeal of fire is known to be most ancient and universal. *Sita*, wife of Rama, the sixth incarnation of Vishur, walked upon red hot iron. "The foot of Sita," says the Hindoo historian, "being clothed in innocence, the devouring heat was to her as a bed of roses." Zoroaster attested his mission by allowing melted lead to be poured upon him, *after he had been well rubbed with certain drugs.* This indicates the manner in which the priests, by the use of their preparations for resisting the action of fire, were able to deliver or destroy whom they pleased. There is evidence that they were also acquainted with the power of fine wire gauze to resist heat, afterwards utilized by Davy, and that by these means they effected those wonderful transformations into real or apparent flames, which have been deemed utterly incredible. The science of meteorology was also carried to a high degree of perfection by the Egyptian priests, and thus being able to predict the state of the weather, were readily regarded as being instrumental in causing such weather as pleased them. Salverte is of opinion that it was thus Joseph was enabled to predict and provide

for the seven years of famine. It is little imagined how much the ancients were acquainted with electricity. There is abundant evidence that they were familiar with the means of drawing it from the clouds and of protecting buildings from lightning.*

The reason why so much of this knowledge is now included in the lost or rediscovered arts is obvious. Each fact held an isolated position, and ran the risk of being altogether lost. This is also seen in the empirical character of alchemy. "The priests," says Salverte, "searched after and sometimes produced astonishing results; but, neglecting the theory of the processes and preserving no record of the means employed, they rarely succeeded in twice obtaining the same result. * * * * Sometimes the facts were only committed to the memory of the priests, and transmitted by oral tradition from age to age. * * * * They were scarcely heard of beyond the precincts of the temples, for the development of the secrets involved the unveiling of the mysteries of religion. The doctrines of the Thaumaturgists were reduced by degrees to a collection of processes which were liable to be lost as soon as they ceased to be habitually practised."

That this art was not only interwoven with the religion and symbolic writings of the Egyptians, but was of the greatest value, is beyond question. Although their writings are lost, their works speak for them. Their monuments, and the discoveries made amid the *debris* of their antique civilization, attest their wide acquaintance with practical chemistry.†

The priests of Egypt having been for ages the sole depositaries of the practice of the sacred art, were finally dispersed, and their writings destroyed by order of Diocletian, who con-

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* Salverte, *Des Sciences Occultes*, Vol. II, p. 154. See National Quarterly Review, Vol. III, No. V, p. 123.

† Les couleurs vives et variées qui enluminent leurs bas-reliefs hiéroglyphiques, les émaux de nuances diverses qui abondent dans leurs tombeaux, et jusqu'a l'outremer dont ou y retrouve de parcelles, tout se réunit pour demontrer l'evidence de cette assertion et pour prouver que les anciens Égyptiens ont comme la plupart de nos applications de chimie industrielle.—Cuvier, *Histoire des Sciences Naturelles*, t. 1, p. 58.

ceived that the frequent insurrections in that country were sustained by the gold fabricated in the temples. Suidas states that the celebrated fleece of gold was only one of their writings upon skins describing the process of making the precious metal.

Dispersed into all countries, the Egyptian priests carried their science with them, and gradually such as was not lost became known to the European nations. The art was next cultivated with great ardor and success by the Greeks, who, in turn, consigned it to the Arabs, and they finally introduced it into the rest of Europe. It was in the tenth century, according to Thompson, that it appeared in Europe, and there, under the name of alchemy, it flourished chiefly from the eleventh to the fifteenth century.

Nothing so truly depicts the spirit of the age—the reign of the imagination. It is this spirit of enthusiasm which alone can explain the crusades and alchemy—the search for the true cross and for the philosopher's stone. Both emanated from the same principle and engrossed all minds, according as the religious or philosophical fervor predominated in individuals. Here the art assumes a new form, reflecting the occupations and manners of the middle ages. In the hands of the monks of the lower empire the practical science of the priest of Thebes and Memphis is transformed into alchemy. Yet all the labors of the Byzantine school served to add but little to the amount of practical knowledge which had descended from antiquity. They could only collect the knowledge of the science into one body of doctrine, and thus open a new path for human inquiry in establishing the first basis of theoretic chemistry.* Towards the end of the seventh century all the savans of the schools had embraced the pursuit with enthusiasm, yet Egypt was regarded as the birthplace of the sciences. Its gigantic monuments and inexplicable hieroglyphics struck the mind with astonishment, and persuaded all that they could only be the loftiest expression of human genius. If, as we must admit, many of the discoveries of

* Cuvier, *History des Sciences Naturelles*, t. 1, p. 870.

modern times be but the recovery of lost arts, yet we must notice in this grand transformation of alchemic science the direction of mental progress not so much toward higher achievement as toward broader comprehension and more general possession. It was no longer a sacred art confined to a close corporation of priests under terrible penalties, but was known to the whole body of monks and all other men of learning and ability who chose to devote themselves to it. Still it was far from being a popular science. It remained for the final transformation into modern chemistry to accomplish that. To the Byzantine school and their experiments in alchemy are due two important discoveries already alluded to—Greek fire and gunpowder. The former was certainly regarded as the palladium of Constantinople. Before its terrible ravages the Arabs were twice compelled to raise the siege of the city. Its use and effects are matters of history, and that its composition was principally of naptha and bitumen is generally known. Constantine Porphyogenetas pretends that the secret of its composition was communicated to Constantine the Great by an angel, and there is an order from that emperor forbidding its being communicated to foreign nations. According to Hoefer,* the discovery of gunpowder was made in the eighth century, and the first description of it is found in the work of Marcus Grecos, entitled, "Art of exterminating enemies by fire." Although written in Latin, it is supposed to be a version of an earlier Greek writing. Its composition is also given in the works of Albertus Magnus and Roger Bacon; hence they have each been regarded as having made the discovery. But it is evidently far more ancient.

These two facts are alone sufficient to redeem the alchemists of the middle ages from the ridicule so often cast upon them. The remaining important discoveries are due to the Arabs, without mention of whom no sketch of the history of alchemy can be complete. They furnished a great number of most zealous devotees to the science, first among whom stands Geber, probably born in the ninth century, from whose name

* *Histoire de la Chimie*, t. 1, p. 281.

and writings Dr. Johnson pretends to derive the origin of the term *gibberish*. Being regarded as the founder of the Arabic school of philosophy and alchemy, the enthusiasm of his followers extended to other nations, and he became the oracle of the alchemists of the middle ages. Roger Bacon justly gave him the title of *magister magistorum* for his twenty-five volumes upon the hermetic art form an encyclopedia of the scientific knowledge of antiquity. To him is ascribed the discovery of nitric acid (that most indispensable agent in all laboratories), aqua regia, and corrosive sublimate. By many this Arab is also regarded as the discoverer of sulphuric acid, and as acquainted with the facts of the augmentation of the weight of metals during the process of calcination. To this illustrious name we must add that of Rhages, who first wrote upon the extraction of sulphuric acid, and Albrucasis, whose description of the alembic in connection with the Arabic etymology of the word has led some to consider him as the inventor of the art of distillation, Arteifus, who described the preparation of soap, Cahil and Bechil, whom Hoefer regards as having been acquainted with phosphorus.

Partly carried by the Moors by way of Africa, and partly borne by current of returning crusaders, Arabian chemistry was brought into Europe. The earliest authentic works of Europe on alchemy are those of Roger Bacon, the physician, chemist, astronomer and antiquary. Little is known of his outward life; the people suspected, dreaded and slandered him, but his writings breathe the spirit of inductive philosophy, truly prophetic of that of his great namesake. They display a degree of knowledge and extent of thought scarcely credible when we consider the time when he wrote—the darkest period of the dark ages. We have seen that he was acquainted with gunpowder although he was not the inventor. The camera obscura, burning glasses, and the powers of the telescope were known to him. His writings upon chemistry alone number eighteen volumes, the prevailing spirit of which is eminently practical. He appears to have believed in the convertibility of the inferior metals into gold, but does not profess to have effected it.

The next great name in the authentic history of alchemy is Albertus Magnus, the learned and pious Dominican, born in Suabia in 1198. A physician, logician, astronomer, magician, and man of the world, he wrote with particular emphasis on the polypharmacy of the time. His style is generally plain and intelligible. He describes the chemical water baths, the alembic, the aludel, and various lutes, and shows himself acquainted with alum, caustic alkali, and the purification of the royal metals by means of lead. St. Thomas Aquinas, who was a pupil of Albrecht's, wrote a treatise upon the "Secrets of Alchemy," and first employed the term "amalgam." The eccentric Raymond Lully is said to have been a pupil of Friar Bacon's, and has been variously considered as an impostor and as a martyr to religion. The story of his having made six million pieces of gold, which he gave to Edward, king of England, to enable him to make war upon the Saracens, is shown by Thompson to be unfounded.* His unintelligible writings present a great contrast to those of Roger and Albrecht, yet he was the first to introduce the use of chemical symbols. They also contain observations upon the distillation of cream-tartar, the deliquescence of the alkalies, the preparation of aqua regia, and the white and red mercurial precipitates. "Restless, intelligent and inventive, he was not without a great degree of utility in his day and generation." His followers were afterward united in an extensive guild or secret fraternity, and known as Lullistins.

One of the most celebrated of all the alchemists was Basil Valentine, a Benedictine monk of Erfret. He introduced antimony into medical use, and his great work, *Currus Triumphalis Antimonii*, is almost a model of positive observation. He was acquainted with arsenic and some of its properties, with many of the preparations of lead, the red oxide of mercury, and all the preparations of antimony mentioned in modern pharmacopœias. In fine, he may be characterized as the founder of analytical chemistry. The last and most prominent figure, one which stands at the point of division between

* *History of Chemistry*, Vol. I., p. 89.

alchemy and chemistry, is Paracelsus. Beginning his career as professor of chemistry at Bâle, in 1527, the earliest chair of chemistry ever established, by burning the books of all the authorities before the crowd of students, he ended it in an obscure tavern at Salzburg, at forty-eight years of age. Ambition, vanity, and habits of intoxication were his ruin. Yet he was a vigorous thinker, and originated a practical movement in science which certainly brought mere alchemy to an end. It was he that set in motion that prosecution of the active principles of mixed or complicated medicaments which has ended in the extraction of quinine, morphia, veratria, theine, and a multitude of valuable proximates. Paracelsus also began that tendency to mingle chemical considerations with the physiology of the human body in health with its pathology in disease, and with the practice of the art of healing: a tendency which is still far from being exhausted.* It was he also who introduced the word *alchehast* into alchemy, the term usually applied to the universal solvent, by some supposed to be composed of the two German vocables, *alle geist*, all spirit. After Paracelsus, the constituent elements of the genuine alchemist seem to have fallen asunder—the practical element being represented by a class of men like Van Helmont, Libarius, Glauber, and Agricola, who devoted themselves with infinite labor to the discovery of new compounds and reactions. The other, the fantastical element, was represented by a host of imitators and impostors, incapable on the one hand of understanding its true spirit, and on the other of any higher motive than that of gain. It was this epoch that produced the mystical trash and absurd compilations of the wildest passages of the old masters, without any of their real knowledge and practical observations, which, being the more accessible literature upon the subject, have been, as Brown justly remarks,† the source from which opinions of alchemical science have been largely drawn.

This brief sketch is sufficient to show that the alchemists

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* *Lectures and Essays*, by S. Brown, Vol I., p. 172.

† *Lectures and Essays*, p. 180.

were a class of men comprising all the commanding intellect of the age reviewed, animated by an indefatigable zeal in the pursuit of a lofty ideal, which, if they did not attain, led them to make many discoveries and inventions of incalculable value to mankind. This ideal was something far higher than any material substance, or spiritual power, capable of transmuting base metals into gold, or of prolonging human life. We have seen a work in which the author argues with great ingenuity and ability that the subject of alchemy was *man*, and its object the perfection of man, by means of the conscience—the true philosopher's stone; that these terms, salt, sulphur, gold, etc., have reference always to this subject; and that the purification of these metals symbolized the regeneration of man. It is true that with this key many of their writings are made much more intelligible, and that their philosophical spirit—that which takes nothing upon authority—was in so strong contrast to the spirit of the age that they were obliged to employ symbolic expressions.

It is also true that many, misled by a literal interpretation of these writings and their own cupidity, possessed with the gold fever which darkened their senses, sought for wealth where none was promised but "the riches of wisdom and the knowledge of God." No true alchemist sought for himself riches or honor. Inspired by the loftiest ideals, and goaded to the solution of all the great problems which have tormented mankind, they sought to reveal the secrets of nature and of man. Yet they were tireless in their investigations into the most minute and often most repulsive substances, resulting in those grand discoveries, the full value of which they could not have known. Their enthusiasm has no parallel, unless in the religious fervor of the crusaders. The term *alchemist* is but a synonym for patience, while he himself was the living emblem of perseverance, carried even beyond the limits of the tomb.*

It was this spirit of self-abnegation which led the alchemists to spend toilsome days and anxious nights over their smoky fur-

* *Histoire de la Chimie*, t. 1, p. 131.

naces, and weary years in the preparation of their works. It was they who kept alive the torch of learning through the darkness which followed its removal from the throne of Rome. The theories of the leading writers are not surpassed in grandeur, and often are remarkable anticipations of those adopted under the accumulated light of the nineteenth century. One of these fundamental theories was that the primitive molecules are under the control of spiritual agency. Creation was the determination of these by certain laws. The grand secret was by investigating these laws to ascertain the features of their primitive organization, and thus to imitate nature by the perfection of art.

They reasoned that whereas every variety of character from imperfection to purity exists in nature, it is her aim to attain perfection, and they were but imitating her in striving to convert the base metal into pure. Assuming that gold exists in all the metals, they concluded that it could be extracted from them all. The alchemic theories of Geber contain nothing of absurdity, for they consist in this: that the metals are composed of two or three elements of a particular nature, and that whoever is able to isolate these has the power to transfer the metallic substance at will.* Artifius, in his *Key to Wisdom*, writes:

> "Minerals proceed from the first elements; plants come from animals, and animals from plants. And as each body is resolved in another of an immediately inferior order, animals come from vegetables, and vegetables from minerals."

These lines, written under a vague inspiration, are no less the expression of a grand and luminous verity. Paracelsus says, "Philosophy is nothing but the study of wisdom considered in created nature."

Roger Bacon, in his small treatise, *Dochirabili Potestate Artis et Naturæ*, begins by pointing out the absurdity of believing in magic, necromancy, charms, or any of those similar opinions which were at that time universally prevalent. He

* Hoefer, *Histoire de la Chimie*, t. 1, p. 311.

points out the various ways in which mankind are deceived by jugglers, ventriloquists, etc.; mentions the advantages which physicians may derive from acting on the imaginations of their patients by means of charms, amulets, and infallible remedies; he affirms that many of those things which are considered as supernatural, are merely so because mankind in general are unacquainted with natural philosophy.* He also points out the causes of the slow diffusion of science:—1. Too much confidence in and submission to authority. 2. Too great regard for custom and popular prejudice. 3. Personal conceit and selfishness, which we judge have not been confined to the age of Bacon. "There is, indeed, no room for national or epochal vanity in the study of the history of science; there is rather occasion for humility and emulation; for those old men worked, with grand ideals and small means, upon an obdurate and unbroken soil, while we stand on fields which they have ploughed, armed with an elaborate instrumentation, and too often guided by ideals which savor more of the shop than of the universe."† Exalted piety and deep humility were also characteristics of the true alchemist. His labors always began and ended with an invocation to the Supreme Being. Sandivogius has this address to the reader:

"Thou, therefore, that desirest to attain to this art, in the first place, put thy whole trust in God thy Creator, and urge him by thy prayers, and then assuredly believe that he will not forsake thee; for if God shall know that thy heart is *sincere*, and that thy whole trust is put in him, he will, by one means or another, show thee a way and assist thee in it, and thou shalt obtain thy desire. The fear of the Lord is the beginning of wisdom. Pray, but yet work. God, indeed, gave understanding, but thou must know how and when to use it."

The work of Cahil on the "Secret of Alchemy" closes with these words: "Eternal praise be to God alone!" Whether Arab, Pagan, or Christian, they all proclaim one article of faith—the supremacy of spirit over matter. To them truth was an axiom. With the alchemist, in Christian

* Thompson, *History of Chemistry*, Vol. 1, p. 34.

† *Essays and Lectures*, by S. Brown, p. 164.

countries, the doctrines of Christ were received as true in themselves, or in the nature of things, and, *therefore*, were believed to have been announced by Christ; but they were not regarded as true simply upon the ground that Christ announced them. "With them the wisdom of the doctrine established the truth of christianity, and not miracles."* Although not entirely free from the tendency of the age, and of all ages, to attribute all understood effects to the intervention of a spiritual agency (either independent of or residing in the atoms of matter), as we see to-day in regard to mesmerism, spiritualism, etc., yet they were far superior to the dwarfing submission to authority which characterized the dark ages. From the cell of the monk and retreat of the hermit went out an uncontrolled spirit of inquiry, which could be stayed only by the limits of the universe. So far from being impostors or deluded enthusiasts were they, that they may justly be regarded as the reformers of the age; for while seeking for the transmutation and purification of the metals, they none the less sought the purification of man from the dross of this sensual life. In the security of their gloomy laboratories they nourished that liberty of thought which at last rushed forth to tear the mask from the veiled prophets of spiritual authority. Yet spiritual power, sustained by popular prejudice, held its terrors over their heads and compelled the use of their enigmatical and symbolic writings. What with the priests of Egypt was a matter of choice, to the monks of Europe was a necessity. To the popular mind the least acquaintance with or control over the power of nature was *prima facie* evidence of magic, and of a league with demons. Every event which struck the senses, and which was not capable of an immediate explanation, was attributed to the agency of supernatural powers. Everything was under control of these intelligences. The earth had its gnomes; the air, its sylphs; water, its *ondines;* and fire, its salamanders. In connection with this belief sprang up anew the practice of magic, known as the occult or cabalistic science. In ruling over the elemental

* E. A. Hitchcock, *Alchemy and the Alchemists*, p. 27.

genii of the globe, the cabalist accomplished all his desires. In intercourse with the sylphs and other supernatural intelligence of the material world the adept sought to obtain ineffable joys unknown to the majority of men.*

Agrippa claims for the occult science the highest rank, and defines it as "the perfection and accomplishment of all the natural sciences." In the universities of the thirteenth century there were professors and courses of magic.† Although these evidently had little faith in their own pretensions, they studiously concealed the fact from the public, and by them were regarded as veritable enchanters. In addition, a cloud of quacks still further deluded the people by their charlatanism.

Hence we see the danger of the alchemist being confounded with the magician in case of his revealing the least of his knowledge. Friar Bacon, than whom no truer scientist ever lived, was in his day regarded as a sort of Dr. Faust, and was brought upon the stage of the period as a personification of magic. The story of his long imprisonment and sufferings, under the charge of being in league with the devil, although he published a book on the *nullity of magic*, is familiar to all.

To see the necessity of esoteric writings, it is only necessary to look at the fate of Vanini Bruno, and thousands of others burned at the stake or otherwise cruelly destroyed. Said Bruno, in his last work:

> "If I had held the plough, or fed a flock, or cultivated a garden, or mended old clothes, none would distinguish and few regard me. But now for describing the field of nature; for being solicitous about the posture of the soul; for being curious about the improvement of the understanding, and for some skill about the faculties of the mind, am I treated in this manner."

Bacon himself gives the reasons for this enigmatic style: "induced," as he tells us, "partly by the conduct of other philosophers, partly by the propriety of the thing, and partly

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* E. Salverte, *Des Sciences Occultes*, p. 110.

† Pouchet, *Histoire des Sciences Naturelles au Moyen Age*, p. 467.

by *the danger of speaking too plainly.*" The symbols themselves are curious and interesting; and, as the philosopher suggests, not without propriety. The earth, air, fire, and water of Empedocles and the Greek philosophers, which result from the chemical process of burning wood, were generalized by the Greek mind to represent what in modern science are known as the four forms of matter—the imponderables, gases, liquids, and solids. These are the salt, sulphur, and mercury of the later alchemists, which also symbolize the body, soul, and spirit of man. Geber reduced the elements to two, sulphur and mercury. The striking transformation which takes place in these substances when mercury is thrown upon melted sulphur, and the subsequent change from black to red, was, as Hoefer remarks, peculiarly adapted to excite the imagination of the ancient artist. "Black and red are nothing less than the symbols of darkness and light, of the bad and good principles; and the reunion of the two principles represent, in the moral order, the universal God. This pantheistical idea has, without doubt, contributed much to establish this famous principle, adopted by the alchemists, that all bodies have for their elements sulphur and mercury." The apparent restoration of lead from the ashes which remain after the "death of the metal," by grains of wheat, caused them to become the symbol of life, and by extension, of resurrection and eternal life. The heating of argentiferous lead in a cupel of pulverized bone—the disappearance of the lead, and the button of silver found at the end of the operation—contributed, not a little, to establish the theory that lead could be transmuted into silver. Animals, as we have seen, were extensively employed in the symbolism of the Egyptians. Thus, the "yellow lion" represents sulphur; the "red lion," cinnabar; the "green lion," the salt of iron or copper; and the "black eagle," the compound of sulphur with mercury. The transformation of this compound into cinnabar, the adepts expressed by saying that the *black eagle is transferred into the red lion.* The triple influence of matter, of life, and of intelligence, they symbolized by the equilateral triangle. The alchemists called the fire of the furnace simply "the dragon," as its

nature was to devour the corruptible elements of a body. The "flying dragon" signified mercury, on account of its power of being volatalized. The dragon guarding the fleece of gold was mercury, which is so difficult to be confined or to sleep. The "dragon put to sleep by Jason" was mercury, fixed by the operations of the adepts. The "dragon devouring his tail" was the symbol of any solid that absorbs water. Human blood was pyroacetic acid. The sun and moon were the emblems respectively of gold and silver. A work of peculiar difficulty was denominated the "labors of Hercules"; and "to gather the apples of Hesperides" was to reap the fruits of the philosopher's stone.

We see, then, that this symbolism was employed from the most ancient period of the art; that it was a necessity to the alchemists of the middle ages; that by it they communicated with each other in a sort of freemasonry; and by its intentional vagueness they not only saved their lives, but escaped being ridiculed. It is also evident that in a period in which there existed no scientific nomenclature, it was impossible otherwise to communicate with each other. Many of those great minds, under a strong but vague inspiration, broke away from the trammels of so inadequate a language into expressions often grand and lofty, but to us, at present, almost unintelligible. It is, doubtless, in a large degree due to this ancient symbolism that chemistry possesses the most exact and convenient nomenclature of any of the sciences. It is the possession of this instrument, an adequate and exact language drawn from the body of classic literature, that constitutes the chief advantage of modern over ancient science. This must be added to the invaluable results which alchemy has bequeathed to modern times.

The true alchemists then, while they were diligent experimentists in pharmaceutical and other practical chemistry, cherished three objects of enthusiastic hope. 1. They believed in the transmutability of metals: it has already been seen on what grounds. The idea of transmutation is as old as Thebes, and as recent as Davy. In one shape or another it is ineradi-

cable from the instincts of the science.* 2. The European alchemists also believed in the elixir of life, or universal medicine, capable of curing all curable diseases, and of prolonging life far beyond its present average duration. It was not until the dotage of alchemy that the conception of an elixir of immortality amused the world. In connection with this unattainable ideal of theirs, it is just to add that Lord Bacon and Descartes were quite as much bent upon the invention of means for the prolongation of life as any alchemist. Worn and exhausted by his constant labors over his furnace and alembic, it is not strange that the alchemist sought therein the means of restoring his wasted health and energies. 3. They believed in the alcahest, or universal solvent. Modern chemistry has realized it in the discovery of fluorine. Lavoisier once expressed his surprise that it should never have occurred to the masters that no vessel on earth could contain this universal solvent, because it would solve the vessel too. As is well known, this was precisely the difficulty with fluorine, until it was suggested that the vessel should be cut out of fluorspar itself, seeing it is a substance already saturated with fluorine.

The question now arises why, with all these grand ideals, their wonderful patience, and incalculable amount of labor, their success was not greater still. The answer readily presents itself. 1. They sought too much. They demanded not only the art of making gold and a universal panacea—riches and health—but the aid of a supernatural power capable of dominating spirit and matter, which opened the door to the realms of mysticism and those inextricable problems before which the most robust reason was obliged to succumb. They placed no limit to the human reason, and were not able to obey their own precepts in addition. "Know thyself," "know nothing too much." They attempted, as it were, at one effort to overleap the whole intermediate chain of links that lead to the primal cause. They also were not aware of the source of error which their lamentable failures have so

* S. Brown, *Lectures and Essays*, p. 183.

signally pointed out to all coming generations. 2. They lived in what has been characterized as the "theological period" of science, in which man, reasoning from the analogy of his own will and variableness, ascribed the same attributes to nature and her laws. Ages passed before her invariableness and orderliness could be impressed upon his mind. Her operations were supposed from this analogy to be the result of the volition of a spiritual agency, at first considered independent of matter, and afterward as residing in its molecules. By the simple elimination of this agent, leaving still the forces in the atoms themselves, we have the modern theory complete. Lastly, they accomplished all that the human mind is capable of, unaided by instruments and a vast amount of accumulated knowledge. We have seen their great want of the instrument of a precise and universal language. We know the defects of the Aristotelian method, the orthodox philosophy of the middle ages; we have seen them hampered upon every side by spiritual power and popular prejudice. We have observed the century growth of rude apparatus in their tireless hands, the gradual wrenching from the arcana of nature of those powerful acids without which the chemist toils in vain. But there is a more comprehensive cause for their slow advancement. It is found in the paradoxical fact that the true methods of discovery were themselves first to be discovered. Or, in other words, "The appropriate ideas said to determine this progress are themselves perfected—brought into distinctness—during the progress of discovery, and cannot be applied as instruments until some progress has been achieved." The interconnection of all the sciences necessitate a simultaneous and slow growth. "It was impossible for any mind, however great, to give a scientific explanation of any phenomenon. He could only suggest an hypothesis or work out a point."* By this false method they were unable to increase their knowledge, and through their imperfect knowledge they failed to detect the falsity of their methods. The wonder is not that they

* Aristotle, *Chapter from History of Science.* G. H. Lewes, London, 1864, p. 55.

accomplished so little, but that they achieved so much. Our sole superiority consists in our ampler basis of facts, knowledge of the source of error, and the application at every step of the test of verification.

Until we are assured that we shall leave posterity no statements to be corrected, no theories to be adjusted, no truths to be realized, let us not imagine that we have given "the last word in science," or be in haste to forget the labors of the past. The search for the philosopher's stone and the elixir of life—the desire for riches and health—is older than the alchemists, as universal as man, and as lasting as human nature.

ART. VI.—1. *The New Charter for the Reformation of the Government of the City of New York.*

2. *Message and other Documents, Speeches, Interviews, etc., etc., of his Honor Mayor Havemeyer.*

3. *Articles, Letters, etc., in praise of Hon. Andrew H. Green.*

THE new reformation in our City Government reminds us, not of one fable, but of a dozen. The mountain in labor is, however, the first that suggests itself. But the result of a mountainous parturition was not always a mouse. Hesiod tells us that formerly it was sometimes a goose, sometimes a donkey, and sometimes a jackal. What it will prove to be in the present case remains to be seen. Even the accoucheurs called in, or who have called in themselves, and secured handsome fees for their services, seem to have serious misgivings. True they praise the animal, as a whole, without stint. They declare him immensely superior in honesty and integrity to all his ancestors; but as they rank the latter in general only among the beasts of prey, their admiration cannot be regarded as of a very high type after all, especially when it is borne in mind

that they admit he has some very ugly spots on his vital parts. These, it is said, may yield to nitrate of silver and sulphuric acid. Then the animal would be as perfect and good as Dryden's *Hind*, and as beautiful and brave as his *Panther*.

But, judging from the results thus far obtained, the spots alluded to will only become more and more ugly and more and more offensive, both to olfactories and eyes, the more carefully they are dressed; for having no tendency to heal, but a very decided tendency to degenerate into gangrene, even those scarifying remedies that have proved so wonderfully efficacious in so many recent cases only make bad worse. Complete excision of them, root and branch, seems to be the only sure remedy, but unfortunately the guardian, or step-father of the long heralded bantling labors under an obliquity of vision which causes him to regard a certain species, even of the most fetid and repulsive ulcers, as things rather to be encouraged in their growth than exterminated.

The next fable we are reminded of by our present "collective wisdom" is that alluded to in Plato's dialogue of the *Statesman*, in which monkeys are spoken of as "a race the most *generous* and the most *handy* of existing animals." This is supposed to be based upon the fact that once upon a time the monkeys held a meeting to consult about the necessity of fixing their dwelling in a city. After they had passed resolutions to that effect, and set their hands to the work, an old monkey stopped them by saying that they would be caught still easier should they shut themselves up within enclosures, for then there was no city without a wall. That is, first they intended to do great things; they would surpass all their ancestors; and big with this idea, they did an enormous amount of chattering. But the patriarch of the tribe had vast experience and skill in the art of government, and had learned from the fate of other illustrious statesmen of his race, caught in their own nets, to be shrewd and cautious withal. He would, therefore, have no walls but mud walls, and even these should be in charge only of those members of the tribe whose chief guide was their stomach!

But let us discard metaphor for the present, and come

to the plain facts. And when we do so, none are more willing to give the new government a fair trial. Our object in the present article is not to make any onslaught upon it. We merely want to remind our readers that it is a very different thing from what we were so long promised with such an immense flourish of trumpets, and to warn those who expect anything very great or good from it that the probability is they will be as much disappointed as they ever were. We do not mean that our present government will rob or plunder on so large a scale as its predecessor. This it were impossible for it to do if ever so well inclined; for it will be too closely watched. But there are some of its members—three or four perhaps—who, had they come into power under more favorable circumstances, when there was less suspicion and less scrutiny, would have had as little scruple to steal a million or two as the most greedy and least scrupulous of the late infamous Ring. It is not necessary for us to indicate those who would be likely to pursue this course if a convenient and safe opportunity presented itself—if there are any of our readers who do not know them they need not make any extensive researches for that purpose. A few brief inquiries where the parties are best known will be sufficient. But, as the matter stands, even these will doubtless prove very honest men, so far as downright stealing is concerned, and as none know better than they how to make a virtue of necessity, we should not be surprised to see them become highly popular in time for their honesty and integrity; especially as there are no people in the world in whose eyes it is easier to throw dust, or who have a larger faith, or a shorter memory, than our good citizens.

Far be it from us to deny that there are honest, good men among the functionaries of our present municipal government —men also who are abundantly qualified for the positions they occupy. But they are nearly as few as angel's visits in modern times. They, however, should not be the less honored on this account. Those having the appointing power are entitled to no praise for the reappointment of Colonel Stebbins to the presidency of the department of Parks; they have merely

saved themselves from additional discredit in his case, for what he has contributed, by his intelligence, taste and perseverance, to make our great Park the attractive and delightful retreat it has now become, is too universally known and appreciated to render it prudent or safe for any clique or party to set him aside and appoint another in his place. There is scarcely an intelligent, disinterested man or woman in New York that knows anything of the management, or mismanagement, of the Central Park during the last decade who would not regard it as an unjust and unwise proceeding to give the place of that gentleman to any one as long as he can be induced to retain it, and to perform its duties faithfully and efficiently as he has always done.

Two or three others have been retained whom it would have been also glaringly unjust to supersede. This is true, for example, of Mr. George H. Andrews of the department of Taxes and Assessments. When there was most corruption, and most temptation to be corrupt, Mr. Andrews, like Mr. Stebbins, continued faithful to his trust. There seems no just objection to the retention of Commissioner Van Nort. Thus far he appears to have performed his duties as head of the department of Public Works without committing any very serious blunders, or exhibiting any obvious tendency to fraud or dishonesty. This, we know, is but a negative recommendation. But what better can justly be given? It cannot be pretended that he has evinced any remarkable talent or aptitude for public improvements; still less can it be pretended that he has any clear knowledge of the science of government further than it relates to the government of such of the working classes as recognize a certain relation between their wages and their votes, and may, therefore, be made useful in other ways than digging, pruning, quarrying, blasting, etc., for the improvement of the metropolis.

But Mr. Van Nort has one qualification for a public functionary which, in our opinion, ought to be regarded as indispensable—namely, common sense. If he has an ambition to be considered an "honest man," he evidently does not deem it necessary to that end to make a buffoon of himself by emu-

lating the fondness of George Francis Train for law suits, or otherwise. In short, Mr. Van Nort has been at some school or seminary where he has learned that a public functionary may be coarse and insolent, even to an extreme degree, to all who are not submissive to his will, without being either honest or honorable. Nay, it seems that our Commissioner of Public Works does not deem civility, and even some degree of courtesy, to the humblest of those who are obliged to have intercourse with him altogether inconsistent with "honesty." We are quite aware that no part of this would be very high praise even of a public door-keeper or bell-ringer, yet it is vastly more than could be said of certain other functionaries—at least of one—retained with Mr. Van Nort for the purpose of securing for New York an "honest" government and enabling our good people to enjoy the fruits of the great reform which has resulted from the discovery of so many thieves!

Of those newly appointed some have a good name, some a very bad name. But the former are untried as public men; they are, however, highly praised as honest and honorable. We hope they will prove the praise is deserved; but which of those justly denounced as robbers and thieves were not once the objects of quite as much laudation and admiration as the new functionaries are now? Accordingly, we will pursue our usual course in regard to the latter. We will not praise them as public officials until we have some evidence that they deserve it; then none will be more willing to do ample justice to all their merits and accomplishments. None of our readers forget how much Peter B. Sweeny was eulogized as the "brains" of the late Ring. For at least a year there was nobody like him; his great talents were exceeded only by his great virtues.

Still more highly praised, if possible, was Andrew H. Green for his "honesty." Brains were not dreamt of in his case. We do not remember that even his most enthusiastic admirers have ventured to give him any credit on that fragile ground. In this respect, indeed, he has been regarded by common consent as very much like Wordsworth's country housewife, who had "little understanding and no wit." But his "honesty," that

was as palpable as the gates of Somnauth; and the former was as much an object of veneration among New York "reformers" as the latter were among the Hindoo Brahmins. We had never supposed ourselves that Mr. Green had committed even petty larceny, not to mention robbery, burglary, etc. But we did not think it was our duty to deliver eulogies upon him merely on the supposition that he had kept his hands from picking and stealing; and as we could not see that there was anything else to eulogize him for, we said nothing of him one way or the other, but waited, as in the case of Sweeny, until his true character began to develop itself in his new position.

But why do we compare Green to Sweeny, or Sweeny to Green? for no two men are more unlike, except in that sublime "honesty" for which each in turn has been lauded to the skies. It will be generally admitted, one day, that in this the twain are well matched, especially if the public will bear in mind, as already intimated, that in Green's time it has been much more difficult to pilfer or steal than it was in Sweeny's time. For the rest, there is as much difference between those distinguished individuals as there is between the mule and the elephant, or between the gander and the fox. We compare them, then, not because they have any similarity to each other, either intellectually or physically, but because as Sweeny was the chief adviser and guide of the old Ring, so is Green the chief adviser and guide of the new Ring. It may be remembered that Mayor Hall could not mention the name of Peter B. Sweeny in any message, report, or other public document without being excited to enthusiastic eulogy of the genius and virtues of that illustrious person. But still more enthusiastic is Mayor Havemeyer in his eulogies on Andrew H. Green. According to our present chief magistrate the virtues of Washington were but common-place compared to those of Andrew H. Green. His Honor admits that great financial ministers have appeared from time to time in England, France, and Germany—men who by their learning, abilities, patriotism and honesty have saved their country in crises such as we had to pass through lately; but there is not one of those who was not

lacking in some great quality which is possessed by Andrew H. Green in a highly developed state! Thus, in the very first communication which Mayor Havemeyer makes to the public as the chosen representative of "reform," he applies his purifying, illuminating brush, as follows:

"The Comptroller has had formidable difficulties to contend with. Upon assuming the management so *unexpectedly forced upon him*, he found the head of the city government and most of the officers and subordinates of its departments in entire sympathy with those corrupt leaders, whose schemes it was his duty to counteract and defeat. Employés of the city connived to secure the payment of improper claims, and dishonest persons resorted and are resorting to every method to get these claims paid. The business of the city had fallen largely into the hands of the very worst classes, and *until recently* respectable dealers hesitated to do business with the departments. To contend with such opposing agencies was a task often delicate, always disagreeable, sometimes full of danger; but it has been discharged *with marked fidelity* to the public interests, and has resulted in checking the current of official profligacy and in compelling at least some improvement in the various departments."

This was very handsome in its way, but we confess it reminded us of nothing more forcibly than of a certain scene described by Sir Richard Steele in the Spectator. We need not refer to this any further than to remark that a celebrated quack doctor, being on a healing tour for the benefit of suffering humanity in the provinces, sends his son and heir before him to proclaim his wonderful and infallible skill. When they reach a town the son advances some five or six yards befor his sire and cries out a long catalogue of diseases which, together with all others that flesh is heir to, he declares his father can cure. The doctor struts along behind, with a grave, imposing physiognomy, his long gray locks bearing testimony to his experience, and his large powdered wig and ample surtout affording evidence of his skill; and as often as the son repeated the catalogue the father nodded his head and ejaculated, in a deep guttural tone, such as might have been expected from the Pythian goddess, or Æsculapius himself, "The boy says true!"

It may be remembered that at one time Mr. Green aspired

to be mayor. For months he was determined to leave no means untried to secure his election. If any one had ever recourse to baser means for the same purpose than he we are not aware of the fact. Nor did he cease to move heaven and earth until even his well-paid sycophants found it necessary to tell him that he had no chance. He was still a candidate while we wrote the last pages of our September number, and Mr. Havemeyer was a candidate at the same time. When Green was forced to recognize the fact that he had no chance of success, he turned round at once and began to work for his patron. It will probably be never known how much of the public money was thus spent by our "honest" comptroller. If the approximate sum were now stated in round numbers it would seem fabulous.

But there is a person named Whittemore, who, if in a communicative mood, could tell all about it, for he is the *alter idem*, the shadow, or, as some call him, the cat's paw of our "honest" comptroller. This, be it remembered, is the upright, unpurchasable individual whom all having certain kinds of claims against the city government had to "see" before they had any chance of being paid what was due to them. Naturally enough, Mr. Whittemore maintained for several weeks, or as long as there seemed to be any hope in that direction, that the only thing to save New York from impending ruin was to make Andrew H. Green our Chief Magistrate. But this done we need have no further anxiety; there never was such a model government in the world, not excepting Plato's Republic, as he could organize. When it is found that all will not do, the protegé turns round like his patron—of course one could not turn without the other any more than either of the Siamese twins could—and discovers one morning, before breakfast, that after all no one was better fitted to save the city than William F. Havemeyer.

This discovery once made, so "smart" a young gentleman, and so clever an "expert," had no difficulty in coming to the conclusion that it was vastly more "honest" to devote half a million or so to so noble a cause than to pay those of the city creditors whose votes might, at the critical moment,

be doubtful at best. It does not in the least surprise us therefore, that we next hear of Mr. Whittemore as the nominee of his Honor for the office of deputy chamberlain. How many other profitable positions that enterprising gentleman may still hold in our reformed municipal bureaux we do not know. At all events he has secured such warm, enthusiastic friends by his accomplishments as an "expert," that none afraid of abuse will dare to evince too much curiosity in this matter. But for our part we have become so accustomed to that sort of thing that it is much more a source of amusement than one of annoyance to us, especially since we cannot but regard it as conclusive evidence that our criticisms do more or less good. In any case, let us be abused as we may by the champions and retainers of the adviser and guide of the new Ring and his worthy colleagues we can hardly be abused more or worse than we have been by those of the adviser and guide of the old Ring and his worthy colleagues.

Not one word was said in this journal, *pro* or *con*, in regard to Andrew H. Green, until it was generally known that he aspired to the mayoralty. Then we gave his portrait in full. Those of our new readers who are curious to know whether we were right or wrong nine months ago in our estimate of Mr. Green as a member of our ruling class, are respectfully referred to the article entitled "Our Candidates as Reformers, Genuine and Spurious."* And they can see at the same time whether we had not a tolerably correct impression of what was to be expected from Mr. Havemeyer. Those who have forgotten the facts may excuse us for refreshing their memory on these points by a brief extract or two. Referring to our present chief magistrate, we remarked: "For aught we know, Mr. Havemeyer is an honest man; we believe he means well. This is but slender praise, but what better can we say of him?" It was our opinion that Mr. James O'Brien would make a more efficient mayor, and we did not hesitate to say so, our reason being the following: "None can charge him with collusion

* *Nat. Quar. Rev.*, No. L., September, 1872. † Ibid, p. 372.

with the Ring; far from betraying any sympathy with the robbers, it is undeniable that no public man took an earlier or more active, earnest part in exposing them."*

We need not assure those in the habit of reading our journal that neither nationality nor politics had any influence on our preference. None set a higher estimate on what the world owes to the great German race than we. That no journalist has taken more pains to make our people acquainted with the thinkers of Germany, and induce them to appreciate their productions, the numerous elaborate papers we have devoted to them for fourteen years past would abundantly prove. We have taken delight in discussing, in separate articles, with our own pen, the peculiar merits of the German poets, philosophers and scientific discoverers; we have done everything in our power, in the same spirit, to encourage not only the study of German literature, but also the German language.

While Mr. Gunther was mayor none were more friendly to him than we. We never made an attack upon him in any form, because we felt that whatever his faults were he was honestly disposed, and that, unlike others, he had higher ideas of his duties as chief magistrate of New York than to exercise his influence for the purpose of placing in office men notoriously unfit for the positions they aspired to, and whose only qualification was that he had been connected with them in business. In a word, none have set a higher value on the many sterling qualities of our German fellow citizens; nor are there any names among those of our merchant princes, who have been the architects of their own fortune by their industry, intelligence and honorable dealing, which we would place above the Steinways and the Gunthers.

Then we preferred O'Brien to Havemeyer, not because the former represented one nationality and one school in politics and the latter another nationality and another school in politics. We did so on the same principle upon which we denounced Peter B. Sweeny as president of the department of Public

* *Nat. Quar. Rev.*, No. L., September, 1872, p. 378.

Parks, whereas we have most gladly awarded, again and again, the full meed of praise to Henry G. Stebbins as the head of the same department.

Some urged against Mr. O'Brien that he was an uneducated man; and none are more opposed to investing the uneducated with power than we. But we thought then, and still think, that if Mr. Havemeyer has any more education or book knowledge than Mr. O'Brien the difference is very slight indeed. It was said, as a triumphant argument against the latter, that he could not write his own messages. Assuming this to be true, is not the same true of the former? Mayor Havemeyer's first message as a reformer is by no means a finished production, but an exceedingly crude, self-contradictory affair. Such as it is, however, our honest chief magistrate could no more have written it than he could have written Schiller's *Wallenstein*, or Dante's *Divina Commedia*.

We were told further that because Mr. O'Brien is not an educated man he is defective in taste and discrimination, and would, therefore, be as likely to nominate for office a disreputable man as a man whose reputation is good. This seemed logical enough. Suppose we accept it as literally true, still may we not ask, with all due respect to "the powers that be," would it not have puzzled Mr. O'Brien or anybody else to hit on one whose appointment would cause more scandal among all decent people who have any knowledge of the character of that distinguished individual than Mr. Oliver Charlick? If any doubt this they need not go back to the time when Mr. Charlick kept rather a low groggery, sold bad whiskey at three cents a glass, and gave a dozen such glasses, on an average, in exchange for a vote. It is altogether superfluous to make any researches among the squalid denizens of the back streets to learn who Mr. Charlick is. All that is necessary is to venture on a tour or two to Greenpoint, on the Long Island railroad, taking two or three trunks of ordinary size, and, stopping at two or three stations on the way, to have a social chat with the inhabitants. It may be that there has been a "reform" there too within the last two or three weeks, but, if not, no one capable of being convinced can make the experiment suggested without being forced to

dmit, however extensive his experience as a traveller may be, hat by no railroad company in Europe or America has he een more shamefully cheated than by the Charlick company. Iowever, there are some who, while they do not scruple to xact all they can from strangers or transient customers, stop- ing at nothing short of downright robbery, treat their regu- ar customers in a manner tolerably decent. But for seven ears past Mr. Charlick has persistently been grossly misrep- esented by the people of Long Island, from one end of his oad to the other, if a more heartless or more unscrupulous xtortioner has ever been foisted on any community by the venging gods.

Our readers may now judge whether the appointment of a nan like Mr. Charlick to so important an office as that of police ommissioner, especially when considered in connection with ther appointments not much, if anything, better, does not how that we said quite as much in favor of our present chief nagistrate as truth and impartial fairness would justify when ve wrote, in September last: "For aught we know, Mr. Have- neyer is an honest man; we believe he means well."*

* It seems that the old commissioner of jurors remains in office after all —at least, that he can do so if he choose. This, however, is not the fault of Mayor Havemeyer, for he lost no time in nominating a new man to take his place. Nor were his Honor's friends in the legislature and those of Comp- troller Green less willing to do their part of the work of setting aside Douglas Taylor in order to make room for a person of the proper kidney. But it seems that in their anxiety to give satisfaction in other particulars, so as to secure as much as they could of the spoils of "reform," they forgot to insert the name of the commissioner of jurors among those condemned to retirement.

Some feel much disappointed at this, and affect to regard it as a for- midable obstacle to reform. But what sin has Mr. Taylor committed? We ask this question because we are not of those who condemn any man on account of the party or clique to which he happens to belong. It is well known that none denounced Tammany men earlier or more unsparingly than we; but first or last we have denounced only the bad—only those who have subsequently proved to the world that they deserved to be denounced.

We have never denounced or condemned Douglas Taylor, because we could never see that there was any just reason why we should. We have abstained in his case for the same reason that we have abstained in that of Matthew T. Brennan, or that of Joseph S. Bosworth. The two latter as

This, however, we allow to stand yet awhile, only subjoining to it another observation, which we made in the same article, in summing up Mr. Havemeyer's claims: "We merely remark, that to have been an indifferent mayor several years ago, and an indifferent chairman of a reform committee one year ago or less, are not sufficient reasons to expect that he would prove anything more or better than an indifferent mayor, if elected now."

While we penned this observation there were those who lauded Mr. Havemeyer to the skies as just the right man to be placed at the head of a reform government. The same parties proclaim now that they are both disappointed and disgusted; we only think that they should also feel a little ashamed of their former ill-judged enthusiasm. But, after we had given our impressions of Mr. Havemeyer, in September last, we proceeded to give our estimate of another aspirant as follows:

"But he would be a Solon and a Lycurgus combined, if that were possible, compared to Andrew H. Green. No one who has given any intelligent attention to the course of Mr. Green as comptroller can conscientiously say, either that he is an honest man, or that he means well." *

When this was written Mr. Green was a model of honesty in the newspapers, although nine out of ten of those who continued to say so in public found it difficult to decide for

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well as the former have been abused from time to time by their political opponents. But we who are not politicians, much less partisans, have never abused them. Nay, for many years we have felt that they deserved approbation much more than censure, not knowing of a single instance in which each did not perform his duty faithfully and honestly. It is because we do not pause for one moment to inquire whether men of this character belong, or have belonged, to Tammany Hall, or any other Hall, that we rejoice rather than grieve to learn that Mr. Douglas Taylor may remain in office or retire, just as he feels disposed; and we believe there are few, if any, disinterested, impartial men that know his real character who will not view the turn his case seems to have taken in the same favorable light.

* *Nat. Quar. Rev.*, No. L. Art. "Our Candidates as Reformers, Genuine and Spurious," p. 373.

themselves, in private, whether, after all the great "reformer" was not more a knave than a fool. The importance of this problem will be the more apparent when it is remembered that he had now so far made himself ridiculous by his puerile, ill-tempered spites and jealousies, and by his interminable law suits at the expense of the city, that even those of his friends whose interests had made them most blind to his faults could not help regarding him only as an imbecile placed by chance in power, which made his head dizzy, and caused him, in this half idiotic, half phrenetic state, to perform such strange antics. In short, the general opinion was that even should he succeed in securing his election on the old plan of buying up as many votes as possible, with the money of the taxpayers, the writ *de lunico inquirendo* should issue in proper form in his case. George Francis Train was nearly as absurd and boisterous then, and as great a nuisance, as ever. But if Mr. Train was insane, at least he had lucid intervals; but if Mr. Green has ever had a lucid interval from the day he was placed in the Comptroller's office by his friends, Richard B. Connolly, William F. Havemeyer *et al.*, to the present moment, the fact has escaped our observation. At all events, the newspapers still clung to the old story, worse than threadbare as it had become. This seemed to us quite a strange phenomenon, and we took the liberty to refer to it thus:

"Who has not seen in several papers such 'notices' as the following: 'The Hon. Andrew H. Green, our honest and able comptroller, delivered a neat speech yesterday,' etc.; 'That little speech delivered by our excellent comptroller on Saturday was in the right vein,' etc., etc.? Then those who watched the proceedings of the Board of Audit for the next week were pretty sure to learn that the paper which spoke so handsomely had its claim of $20,000, $15,000, or at least $10,000, 'allowed and ordered to be paid!'" *

But here we can only reproduce the lighter shades of the picture. Those wishing to examine the deeper in order to decide for themselves how faithful, or unfaithful, they are to nature

* *Nat. Quar. Rev.*, No. L. Art. "Our Candidates as Reformers, Genuine and Spurious," pp. 784–5.

must turn to our first sketch. We will, however, snatch from it another little fragment. The following lines from the "Monody"—a sort of miniature accompanying the larger portrait—were considered last September, by most persons acquainted with the subject, as containing much more truth than poetry:

> "Nor thief, nor Thug is Andy Green,
> But a 'reformer' true I ween!
> One of that lib'ral gen'rous stuff
> That pays ten thousand for a puff!
> And, what is still more strange and funny,
> Without a puff he'll pay no money!"

It is almost superfluous to say, that the champions of "our excellent comptroller," as well as that distinguished functionary himself, were highly indignant at our whole *tableau*. The number of our journal containing it had not been issued more than two or three days, when several letters and editorial articles published in certain city papers were enclosed to us in as many envelops; all addressed in the same handwriting, those documents, bristling with such headings, in large capitals as, "A faithful public officer—Andrew H. Green." "What an honest incorruptible public officer can do in a dangerous crisis," etc., etc.

It may be easily imagined how eulogistic was the style of the letters and articles thus headed. We have preserved one or two of them as curiosities. If they are entitled to the slightest credit, all the great financial ministers of ancient and modern times were the most stupid blunderers or the most arrant thieves compared to Andrew H. Green, who must henceforth, forever, be regarded as the model financier of the world—the only high functionary whose profound knowledge of political economy, and statesmanship, is equal to his unpurchasable honesty!

All would not do, however. No party, clique, or cabal was silly and daring enough to nominate him for the mayoralty, the lion's skin having become completely shattered at this time. It is said that at this crisis Col. Stebbins called his attention, out of pity, to the fable of the Lydian mule as related by Plutarch in "The Banquet of the Seven Wise Men." The

effect of this on "our excellent comptroller" was very profound. It suggested to him the wisdom of making a virtue of necessity, and thus it was that he retired so modestly and patriotically from the candidacy for the mayoralty, declaring, as already intimated, that Mr. Havemeyer is the only man to save New York! When election time came Green and other friends had plenty of money, and the great desideratum was secured.

But a difficulty soon arose. A new charter was framed. The more sensible and honest of those who had to do with this instrument thought it would be as well to allow Mr. Green to return to private life. Some went so far as to resolve that if his well-known zeal for "reform" rendered him unwilling to allow the department of Finance to pass from his hands into any other, gentle force should be used for that purpose. Naturally enough, our new mayor was highly indignant; did they want to insult him by depriving him of his pet? or did they wish to have the city treasury plundered again by withdrawing from it the incorruptible, protecting hand of Reformer Green? Some slight revelations were made in our State Legislature during the discussion of these weighty questions. We copy the following from a report given by the Herald, while the great controversy was proceeding, as an illustration:

"Senator Madden—Havemeyer has insulted this legislative body. I think he is in second childhood. A good republican had the bill relative to common schools passed in this body, giving the appointment of school commissioners to the mayor, and yet when he had offered twenty-one names for those positions the mayor only named five out of them. This was dishonest. There is something radically wrong about such a mayor. He is endorsed by the Committee of Seventy, which also endorses Andrew H. Green, *who had a bill presented here* by my venerable friend from the Fifth, which gave him power that the Czar of Russia would never have dared to ask for. And *who is Green?* Let us pull off the tinsel that surrounded this only honest man. Why he has driven away nearly all the business (in supplies, I mean) of that city because *honest men refuse to submit to his dictation*, and he refuses to pay their honest bills; but I remember when the Central Park Commission bill was passed no compensation was asked for, but *two years after this Andrew H. Green, Treasurer of this Commission, came here and asked a salary of* $10,000 *a year.*

"A HOWL AT GREEN'S GRAB.

"Messrs. Weismann and Benedict, simultaneously—No, five.

"Mr. Madden (in a towering rage, and with a force that whirled both the fragile and venerable New Yorkers back in their seats, as if they were shot)—No, sir; ten. *He took* $10,000 *a year for two years past, and drew it every year afterward, and, besides, he drew* $300 *a year for his personal expenses.* Now I don't want to hear any more about Green *and his honesty.*"

Senator Madden was favored with a liberal amount of abuse for this exposition by the champions of Green, but we have not seen or heard that anyone has attempted to disprove the essential facts. During the same controversy the independent press began to admit that they had been somewhat mistaken in their estimate of Mr. Green at the outset of his career as comptroller. Thus, for example, in one of a series of articles on the same subject, the Herald proceeds, as follows:

"But, in his reply to our questions regarding the interest on the city deposits, Comptroller Green attempts to mystify the matter in a very curious and suspicious manner. The facts are very simple. Under Chamberlain Devlin the city received no interest on amounts remaining in the city and county treasury. The Chamberlain did, however, receive interest, *which he put into his own pocket.* The deposits were worth a great deal to the banks, and they paid the Chamberlain, we believe, four per cent. for the use of the money. The greater the amount in the treasury the more profit the city chamberlain realized. The consequence was that month after month the balances reached into the millions, and upon all this amount, at least for nine months in the year, the people were paying seven per cent. interest, the money being raised on city revenue bonds in anticipation of taxation. Chamberlain Devlin is said to have made *over a million dollars out of this interest.** Chamberlain Sweeny decided to give up this perquisite of

* Some of our readers will probably remember at least a portion of our explanation of the manner in which we were assailed by certain parties in our battle with the Ring plunderers. Foremost among those who manifested to us their sympathy with Sweeny, Tweed & Co. against us were the Jesuits of St. Xavier's College, in this city. We showed at the time that there was good reason for this sympathy—that there were none of the plunderers who were not very liberal and accommodating to the good Fathers, and also to their spiritual Sisters. We alluded to the handsome things Chamberlain

the office and to pay over the interest received to the credit of the city. His immediate successor, Chamberlain Bradley, kept up the practice. The interest account was kept separately, and when Mr. Bradley retired from office it reached nearly half a million dollars. This fund was not all the advantage the city derived from the new system. There being no object in keeping heavy balances in the treasury, for which the city received four per cent. interest and paid seven per cent., the balances ran down to a few hundred thousand dollars, and the interest paid on revenue bonds proportionately decreased."

None of our readers will accuse us of having extracted this passage for the purpose of showing that either Sweeny or Bradley was an honest man. We have done so for the purpose of showing that however dishonest both were, as public functionaries, they were not as barefacedly so as some who would have the world regard them as paragons of honesty. But we will make room for another paragraph or two:

"From the statements of the chamberlain and his deputy, which appear in the Herald to-day, it will be seen that since December last not a single dollar of interest has been paid to the credit of the city. The table of monthly balances during the year shows a gross amount of over sixty-seven millions, or an average of about five millions and a half, in round numbers, per month. Four per cent. interest on these deposits would have realized two hundred and twenty thousand dollars. Not a cent has been paid. The benefit of the large deposits has gone *into some person's pockets;* it has not been secured by the tax-payers.

Devlin, with the rest, had done for them, including the scholarship which he had established in their college, to be known to all posterity as the Devlin scholarship. Since their influence in making the Irish vote in the proper way enabled the Chamberlain to make a million by the interest on the city deposits alone, not to mention other little pickings, he would have proved himself very ungrateful had he not requited them liberally for their pains. The Chamberlain's heir, and his successor in the tailoring branch of his business, fully recognizing this fact, has, it seems, donated another fraction of the ill-gotten million or millions to the same institution. It is needless for us to assure our readers that we have never made a criticism on the Jesuits as priests or as Catholics, but as intermeddling, spiteful and mischievous politicians, men who, instead of being, as they pretend, the pillars of the Catholic Church, are really its worst enemies in spite of their bigotry and intolerance. Nor would we have said a word about the Devlin millions now had we not known that our "honest" reformers have also been negotiating on quite a large scale with the good Fathers.

"Let us examine the manner in which Comptroller Green *attempts to evade responsibility* for this *return to the rotten system of the worst days of Tammany rule, and the efforts he makes to befog the plain issue.* He admits that he prohibited, last December, the practice of keeping a separate account and making a separate monthly return, which every taxpayer could understand, of the amount of deposits during the month, and the amount of interest received and paid over to the city. But he affects ignorance of the after-fate of the interest, when its visible life had been thus cut off, and 'assumes' that it is 'credited where it ought to be, along with the principal of the various accounts on which it has accrued.' Is this an honest statement?"

This article appeared December 18, 1872, just three months after we had given our portrait of Andrew H. Green. Senator Madden's sketch was a little later. At all events, our readers will remember that we made no accusation against our "honest" comptroller which was not fully substantiated within four months after its publication. It was generally believed when his name was omitted from the new charter that his career as a high functionary was pretty nearly at an end. But those who thought so had no idea either of what money can do at Albany, or how liberally Andrew H. Green can use the public money when there is a tolerably good prospect that in due time it will return with interest to his own pocket. We confess that we were ill-natured enough to believe that, although Mr. Green would abstain, for obvious reasons, from appearing personally among the lobbyists, as he had done a year previously when the first charter was before the legislature, he would do everything else in his power to prolong his hold on the public treasury. And so the fact has proved. Hence it is, that as Peter B. Sweeny, whom all acknowledge to have some brains, was the adviser and guide of the old Ring, Andrew H. Green, whom all acknowledge to be devoid of brains, is the adviser and guide of the new Ring! And thus it is that our reform comptroller and reform mayor have so nearly become one flesh that we question whether Pope did not refer to politics as much as to matrimony when he penned the well known couplet:

"There swims no goose so Green but soon or late,
She'll find some 'honest' gander for a mate."

Thus we think we can claim to-day, without any undue assumption, that our impressions, good, bad, and indifferent, of September last in regard to our candidates for office, were pretty nearly correct. There has not been time yet, for a full development of the facts; but so far as the different trees have borne fruit by which their character could be judged, our estimate of Mr. Havemeyer and Mr. Green has been proved to be as just as that which we gave of General Dix in the same article, and which we closed as follows:

"In short, no one questions for a moment, either the ability or the integrity of General Dix, for the reason that he is one of the very few that have filled several important offices with unsullied honor. Accordingly he is not the less our choice for being a general; he is not the less our choice for being a Republican; nay, he is not the less our choice for being a zealous advocate of the re-election of General Grant."*

Now, from the day upon which these various impressions were penned until the present we have never asked the slightest favor of any of these gentlemen. We have neither called upon, or written to, either Mayor Havemeyer or his pet. We have been quite aware from the outset of the large amount of patronage in the gift of his Honor; but the offices he has, or rather had, to bestow, have excited our cupidity about as much as those bestowed on the faithful of his jurisdiction by the Grand Lama of Thibet. We have never applied to anybody, directly or indirectly, for any office whatever, and it is our intention to remain so for the rest of our life. But had our aspirations been different—had we been as anxious in this respect as the most greedy and persistent office-seekers—we certainly should not like such colleagues as those who seem to be the particular favorites of his Honor. Of all connected with the old *régime* no one, we believe, has been more abused than "Hank" Smith. Whether this interesting member of the Smith family has deserved all the opprobrium cast upon him, or has perpetrated all the crimes attributed to him, we do not know. Except from hearsay we know nothing whatever

* *Nat. Quar. Rev.*, No. L., p. 371.

against "Hank." But assuming that he is really the black sheep or speckled wolf which two rival journals have painted him for the fiftieth time, still we cannot believe that he is blacker, or more speckled at heart, than Mr. Oliver Charlick. And this is the sort of man which a reform mayor, reform aldermen, and reform councilmen put in the place of Judge Bosworth!—a gentleman who would be considered by competent judges in any country in the world as eminently qualified, by intelligence, talent and integrity, not only for that he held but for a much higher position.

Yet the reformation of which we have heard, and still hear, so much may prove to be genuine. Certainly none would rejoice at such a consummation more than we. And if Mr. Henry Smith has become a new man, why may not Mr. Oliver Charlick? Then if the interviewers have taught our venerable Mayor three or four useful things in statesmanship, why may they not teach him a dozen such? But we protest, in passing, against their making our worthy chief magistrate a laughing stock at home and abroad as a sort of reformed Mrs. Grundy. Their performances and their results are far too suggestive of pouring small beer, or lager, into an empty pitcher through one orifice and pumping it out through another. In such an operation what goes in small beer or lager must come out small beer or lager, as the case may be, except that scarcely any pitcher is so well drained of its former contents but that it must retain more or less sediment. This sediment may so tinge the small beer or lager that it may be palmed off on the vulgar as hock or burgundy. But the same tinge causes the stomach which is at all fastidious—nay, any stomach not sadly depraved by the cheapest and sloppiest kind of food—to revolt against the liquid so poured in and pumped out more than it would have done had the thing acquired no tinge in its passage through the two orifices. But let us hope for the sake of public decorum, and for the credit of the great city of New York, that enough has been said for the present. At all events, we can do no more at present than to ask the following question. Should our model comptroller exhibit any more of those eccentricities

characteristic of minds of large calibre like his, is there not reason to hope that the writ which has proved so salutary in the case of the great Train may prove equally so in the case of the great Green?

ART. VII.—1. *Sketches of the Life and Character of Patrick Henry.* By WILLIAM WIRT. New York.

2. *The Virginia Convention of* 1776. A Discourse delivered at William and Mary College, 1855. By HUGH BLAIR GRIGSBY. Also *Letters of Mr. Grigsby and of William Wirtt Henry.* 1872.

3. *The Debates in the Several State Conventions on the adoption of the Federal Constitution.* By JONATHAN ELLIOT. 5 vols. Washington.

4. *American Biography.* 1st vol. By ALEXANDER EVERETT. *Life of Patrick Henry.*

REVOLUTIONARY times bring forward great men. We cannot point to such a period without finding a cluster of them. The marked men of all times are usually connected with some such events, and the magnitude of the events keep their renown before the world. It takes a memorable period to try and develop men and heroes. Cromwell, Napoleon, Frederick, and Washington, were not less moulded in such times than were John DeWitt, Mirabeau, Castellor, and our own Adams, Jefferson, and Henry. What but such times could have handed down the names of Demosthenes and Cicero, as well as the sturdy Brutus and Cato. Indeed, it requires an exigency to try the virtues and the weaknesses of mankind; and for this reason, all heroes, and many statesmen, are made by war. It requires an extraordinary genius to engrave his name in the records of nations, so

against "Hank." ...with the convulsi...ns
sheep or speci... ...r science or lett...rs
him for the ... ...not made great ...by
blacker, or ... ...eare, Racine, or C...r-
And this is ... ...ts of humanity, a ...nd
aldermen, a... ...guide and cheer m...n-
Bosworth! ... ...no darkness can lo...ng
tent judges ... ...me statesmanship m...ay
by intellig... ...ts of state give lasti...ng
but for a m... ...n and Robespierre, to...a
Yet th... ...n Revolution had but o...ne
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would rej... ...een had her patriots, w...ho
if Mr. H... ...country in this great w...ar,
Mr. Olive... ...three, if not the foremo...st,
our vener... ...time, presented a galaxy ...of
ship, wh... ...which is still seen by all ey...es,
protest, ...ved by all tongues. Of the...se
magistr... ...ed, in the civil line, Patric...k
formed ... ...Lee were the foremost, thou...gh
are far ... ...overshadowed by several me...n
empty ... ...in that state, but who were lo...st
anothe... ...Henry and Lee soon took th...e
lager ... ...time, we propose to recall th...e
excep... ...and distinguish his peculiarities, no...t
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ment...
that ... ...the 29th of May, 1736, at Studley...,
But ... ... His family removed to Moun...t
ous ... ...ry, where he was brought up and
and ... ...was a native of Aberdeen, in Scotland.
pos... ...David Henry, the successor of Edward
ha... ...of the "Gentleman's Magazine," and
tw... ...maternal line, of Dr. William Robertson,
n... ...of Scotland. Mrs. Henry, the grand-
h... ...Henry, was Jane Robertson, sister to Dr.
r... ...the grandmother of Lord Brougham, to
... ...his talents and success. One of the

of Patrick Henry was the grandmother of William C. [illegible], and of Gen. John S. Preston, of South Carolina, and [illegible] sister was grandmother of Gen. Joseph E. Johnson. [illegible] father of Patrick Henry was liberally educated, and [illegible] Patrick had reached the age of ten he was under his [illegible]truction for the next five years, during which period he [illegible] well grounded in the classics, and read, as he told John Adams, Livy and Virgil in the original, and made [illegible]ome progress in mathematics. He had also a knowledge of Greek beyond what Wirt represents, and left among his books a well worn Greek testament, with Latin notes. His library was small and well selected, and what he read was thoroughly digested. The speeches of Mr. Henry show that he knew history, though they do not prove that he had made very extensive studies in history. Yet the debates upon the constitution leave no doubt that he could promptly grapple with all the diverse questions of history and government when opposed by such lights as James Madison, Edmund Randolph, and John Marshall. It is believed that Mr. Wirt erred in disparaging Mr. Henry's attainments, and exaggerating his indolence. Mr. Pollard, who has called in question the fame of Henry as a great orator, says that upon one occasion he shut himself up for three days to study an important cause, without even seeing his family. Does this show that Henry had such aversion to study as we have been led to suppose? or is there anything in his life to show that he could have been an indolent man? Certainly, his hunting, and fishing, and his social habits, all show that he was no sluggard, though he was too easy and good-natured with his customers to make a successful merchant, even in a country village. Indeed, it became the fashion of his cotemporaries to set up Henry's genius at the expense of his habits and attainments; and Jefferson has related some incidents and characteristics that doubtless he was told, but which had really no foundation in truth. In claiming for Henry a fair and good training in the classics at the age of fifteen, we but assert what has been handed down to this day in the family of Patrick Henry.

Indeed, his six weeks study and admission to the bar,

as to endure, when wholly disconnected with the convulsions of the state, unless he be distinguished for science or letters alone. Bacon, Aristotle, and Plato, were not made great by convulsions any more than was Shakespeare, Racine, or Corneille. These are the intellectual lights of humanity, and they will come forth in all periods to guide and cheer mankind. They are the fixed stars, and no darkness can long obscure their resplendent light. So true statesmanship may exist in all times, but the convulsions of state give lasting fame, though consigned, like Danton and Robespierre, to a damning renown. But the American Revolution had but one Arnold, while it produced many noble characters and heroes. Indeed, every state of the old thirteen had her patriots, who made every sacrifice for their country in this great war, and Virginia, as one of the three, if not the foremost, of the great states of that time, presented a galaxy of names of the first character, which is still seen by all eyes, and whose names are pronounced by all tongues. Of these distinguished men of this period, in the civil line, Patrick Henry and Richard Henry Lee were the foremost, though they were, in the beginning, overshadowed by several men who had long held great sway in that state, but who were lost by the convulsion, in which Henry and Lee soon took the lead. Connected with this time, we propose to recall the career of Patrick Henry, and distinguish his peculiarities, not only as an orator, but as one of the great leaders of the American Revolution.

Patrick Henry was born the 29th of May, 1736, at Studley, Hanover county, Virginia. His family removed to Mount Brillian, in the same county, where he was brought up and educated. His father was a native of Aberdeen, in Scotland. He was a cousin of David Henry, the successor of Edward Cave in the publication of the "Gentleman's Magazine," and was a nephew, in the maternal line, of Dr. William Robertson, the great historian of Scotland. Mrs. Henry, the grandmother of Patrick Henry, was Jane Robertson, sister to Dr. Robertson, and to the grandmother of Lord Brougham, to whom he said he owed his talents and success. One of the

sisters of Patrick Henry was the grandmother of William C. Preston, and of Gen. John S. Preston, of South Carolina, and another sister was grandmother of Gen. Joseph E. Johnson. The father of Patrick Henry was liberally educated, and after Patrick had reached the age of ten he was under his instruction for the next five years, during which period he was well grounded in the classics, and read, as he told John Adams, Livy and Virgil in the original, and made some progress in mathematics. He had also a knowledge of Greek beyond what Wirt represents, and left among his books a well worn Greek testament, with Latin notes. His library was small and well selected, and what he read was thoroughly digested. The speeches of Mr. Henry show that he knew history, though they do not prove that he had made very extensive studies in history. Yet the debates upon the constitution leave no doubt that he could promptly grapple with all the diverse questions of history and government when opposed by such lights as James Madison, Edmund Randolph, and John Marshall. It is believed that Mr. Wirt erred in disparaging Mr. Henry's attainments, and exaggerating his indolence. Mr. Pollard, who has called in question the fame of Henry as a great orator, says that upon one occasion he shut himself up for three days to study an important cause, without even seeing his family. Does this show that Henry had such aversion to study as we have been led to suppose? or is there anything in his life to show that he could have been an indolent man? Certainly, his hunting, and fishing, and his social habits, all show that he was no sluggard, though he was too easy and good-natured with his customers to make a successful merchant, even in a country village. Indeed, it became the fashion of his cotemporaries to set up Henry's genius at the expense of his habits and attainments; and Jefferson has related some incidents and characteristics that doubtless he was told, but which had really no foundation in truth. In claiming for Henry a fair and good training in the classics at the age of fifteen, we but assert what has been handed down to this day in the family of Patrick Henry.

Indeed, his six weeks study and admission to the bar,

where there were learning and accomplishments, proves the genius and skill of Henry.* He combated the examiners and sustained himself with so much tact and ingenuity that it is apparent that he strongly grasped leading principles and won the friendship and admiration of the examiners, who saw that his law knowledge was very superficial. Upon his promising to improve and pursue his studies, his license was signed, making young Henry an attorney at law. He had married at eighteen, and the cares of a family without fortune were resting upon him. It certainly was not a very brilliant opening, at the age of four-and-twenty; but he struggled on for three years, and after the brilliant argument of the "Parsons' Cause," retainers poured in upon him, and his family no longer wanted for bread. Mr. Henry soon commanded a very considerable business, and laid the foundation of a large estate, which was required by an increasing family. At his death he left a good estate, which had come from the practice of his profession and well judged investments. His success was such that when Mr. Nicholas, who was one of the leaders of the Virginia bar, gave up practice, he turned it all over to Mr. Henry, thus showing that he was a successful lawyer as well as a brilliant advocate.

This much is said to meet the charge that Henry had no habits of business or of study. His eminent success and extensive practice prove the contrary. The idle, indolent lawyer may do upon occasion great things at the bar, but such a man cannot keep a large business as Henry did. So Mr. Jefferson, who saw little of Henry at the bar, was misled as to the habits and even attainments of Patrick Henry, who was the greatest

* Mr. Randolph affected to dissent from one of Henry's answers, and called upon him for his reasons. After a considerable discussion Randolph said to him, "You defend your opinions well, but now to the law and the testimony," and opening the authority, said to him, "behold the face of natural reason! You have never seen these books, nor this principle of the law, yet you are right and I am wrong, and from the lesson you have given me I will never trust to appearances again." He then said, "If your industry be only half equal to your genius, I augur that you will do well and become an ornament and an honor to your profession."

and most successful criminal advocate at the Virginia bar, and in this respect Mr. Wirt said Virginia would not see his like again. Let any one take up that career of Henry as narrated in his Life, as written by the accomplished William Wirt, and he cannot longer doubt but Henry was a lawyer difficult to meet in any forum. The outline of his argument before John Jay and his associates of the supreme court, upon the British debts, proves him an advocate of the first order upon the greatest subjects of international law. When he had proceeded somewhat in the case, John Randolph, who sat near the bench, overheard Judge Iredell say to his associates on the bench, "Good God, he is an orator indeed." Add to this the testimony of Dr. Alexander of Princeton, who heard Henry the last time he ever addressed the public at Charlotte Court House in opposition to the Virginia Resolutions of '98, and also heard him in a previous criminal cause, and we have the undoubted proof of competent judges that Henry was the masterly orator which tradition has represented him.

Mr. Henry, at the age of 27, appeared in the Parsons' cause, and astonished everybody by his success, and the populace bore him from the court and carried him around on their shoulders in triumph. Before his accusation and denunciation the clergy lost their cause, though they were undoubtedly right in strictness of law. Able lawyers had abandoned the case, and thus the young attorney was called in and won his first renown against this tobacco tax in behalf of the clergy. It was at this time that his uncle, the Rev. Patrick Henry, was requested by him not to remain at the trial, as he should be obliged to say some hard things of the clergy. Henry triumphed, and his fame extended throughout Virginia, though not a word remains of what he said, except in tradition; under all the circumstances, the first speech of Lord Erskine was not more masterly than Henry's in the Parsons' cause. Mr. Wirt says that the highest compliment ever paid in that county to any orator was to say that he was almost equal to Patrick when he pleaded against the parsons. He appears at Williamsburg, the capital of the state, before a committee on contested elections of the house of burgesses in

1764. He appeared in a rustic suit, but when he spoke such was his eloquence that deep silence prevailed during his speech, and the rustic young lawyer of Hanover became famous among the men at the seat of government.

In 1764, the British Parliament had passed resolutions for the purpose of raising a revenue in the colonies by means of a stamp-tax. These resolutions were communicated to the house of burgesses by their colonial agent at London, and having been considered, a special committee was appointed to prepare an address to the king, a memorial to the lords, and a remonstrance to the house of commons. These papers were reported, and they affirm in clear and strong terms the constitutional exemption of the colony from taxation by the British parliament. The stamp-act passed in January, 1765, to take effect the first of the next November. The colonies were amazed at this measure, but the press seemed disposed to counsel submission and peace. Some thought the united remonstrances of the colonies would be heard, while others thought submission and taxation unavoidable. The idea of resistance by force was no where entertained, and no one spoke in open defiance of the measure. It was at this period of despondency and suspense that Henry was elected a member of the house of burgesses, and stood forth defiantly to resist the stamp-act. He appeared in that house the 20th of May, 1765, where he was personally quite unknown. His dress and manners were still those of the plain planter, and in his personal appearance there was nothing to excite curiosity or awaken expectation. This body was then composed of the landed aristocracy of Virginia, and the manners of the time were very courtly as we saw it exemplified still later in a marked manner in the administration of Washington. John Robinson was the speaker and the acknowledged head of its landed aristocracy, before whom the yeomanry from whom Henry sprang were accustomed to bow with deference. Peyton Randolph, one of Henry's examiners on his admission to the bar, was the king's attorney-general, and stood next in rank to the speaker.

Edmund Pendleton, the favorite of the speaker, was very

prominent in the house. His mind was of a high order, and he was a lawyer and statesman. Geo. Wythe was among the first in ability and learning. He became the chancellor of Virginia, with whom Henry Clay made his studies for the bar. But there was Richard Henry Lee, largely endowed, the finest scholar and the greatest orator of the house, who, ten years later, moved the Declaration of Independence in the Continental Congress. Lee was not a lawyer by profession, but he was well grounded in the principles of constitutional law. Wirt says his eloquence was smooth and sweet, and flowed on like a placid river. These were some of the leaders in that house when Patrick Henry first appeared among them at the age of twenty-nine as a novice in legislation. He had been returned to oppose the stamp-act, and after one speech upon some business matters, in which he alarmed and awed the aristocracy by his genius and eloquence, this inexperienced member, after vainly waiting for some one to lead, brought forward his resolutions against the stamp-act. He was thus the first champion of colonial liberty to raise the standard of resistance in 1765. Mr. Jefferson has said that he set the ball of the revolution in motion; and John Adams wrote, June 3, 1776, that "I know of none so competent to the task as the author of the first Virginia resolutions against the stamp-act, who will have the glory with posterity of beginning and concluding this revolution. Happy Virginia, whose constitution is to be framed by so masterly a builder." Mr. Henry left a paper sealed up which was opened after his death, in which he says:

"These resolutions passed the house of burgesses in May, 1765, and they formed the first opposition to the stamp-act, and the scheme of taxing America by the British parliament. All the colonies, either through fear or want of opportunity to form an opposition, or from influence of some kind or other, had remained silent. I had been for the first time elected a burgess, a few days before, was young, inexperienced, unacquainted with the forms of the house, and the members that composed it. Finding every person of weight averse to opposition, and the commencement of the tax at hand, and that no person was likely to step forth, I determined to venture, and alone,

unadvised, and unassisted, on a blank leaf of an old law book wrote the within.

"Upon offering them to the house, violent debates ensued; many threats were uttered, and much abuse cast on me by the party of submission. After a long and warm contest, the resolutions passed by a very small majority, perhaps of one or two only. The alarm spread throughout America with astonishing quickness, and the ministerial party were overwhelmed. The great point of resistance to British taxation was universally established in the colonies. This brought on the war which finally separated the two countries, and gave independence to ours. Whether this will prove a blessing or a curse will depend upon the use our people make of the blessings which a gracious God hath bestowed on us. If they are wise they will be great and happy; if they are of a contrary character they will be miserable. Righteousness alone can exalt them as a nation. Reader, whoever thou art, *remember this, and in thy sphere practice virtue thyself and encourage it in others.*"

Such is the succinct and graphic account this great patriot left of this transaction, and we are not aware that it is in the slightest overdrawn by the mover of the resolutions of resistance to the stamp-act of 1765.

Mr. Jefferson says that Henry moved and Johnson seconded these resolutions, and were opposed by Randolph, Bland, Pendleton, Wythe, and all the old members in the house whose influence till that time had been unbroken. They opposed them not as a question of right but upon the ground that at the preceding session they had expressed the same sentiments in a more conciliatory form to which an answer had not been received. But torrents of sublime eloquence from Henry, backed by the solid reasoning of Johnson, prevailed. Jefferson stood at the door between the house and the lobby during the whole debate, and heard Peyton Randolph exclaim, as he came out, "By God, I would have given 500 guineas for a single vote, for one would have divided the house, and Robinson being in the chair would have negatived the last resolution." Henry leaving town, the fifth and obnoxious resolution was the next day expunged from the journal. The rescinded resolution declared that the general assembly have the sole right and power to lay taxes and impositions upon the inhabitants of this colony, and that every attempt to vest such power in any

person or persons whatsoever, other than the general assembly, has a manifest tendency to destroy British as well as American freedom. This resolution embraced the very principle on which the war was afterwards fought and won, and Henry is entitled to the paternity of it if any man can lay claim to it. Thus at one stroke Henry became the great leader of the revolution, and of the house of burgesses. It was in the midst of this magnificent debate, and while he was denouncing the obnoxious act, that he exclaimed in a voice of thunder, and with that terrible look, "Cæsar had his Brutus—Charles the First his Cromwell—and George the Third—" ("Treason," cried the speaker, "treason, treason!" echoed from every part of the house. It was one of those trying moments which are decisive of character. Henry faltered not for an instant, but rising to a loftier attitude, and fixing on the speaker an eye of the most determined fire, he finished his sentence with the firmest emphasis), "may profit *by their example.* If *this* be treason, make the most of it." After this their was no longer a question who was the great orator and statesman of Virginia, for henceforth he was the idol of the people, and took the foremost place in all their councils for the next thirty years. This impulse given by Virginia spread in the other colonies, and they everywhere joined in the march to resistance, until the whole continent was in a flame, and by the time the stamp-act was to have taken effect there was nobody in America to execute it. Seeing this, the British parliament caused its final repeal, which was announced by the speaker in the burgesses at the opening of the next session, and the house in a paroxysm of joy voted a statue to the king and an obelisk to the British patriots by whose exertions the repeal had been effected.

But it was not long after the repeal of the stamp-act before parliament resolved on a plan to raise supplies in America, and quartered troops in the large towns. Charles Townsend said that the legislative authority extended over the colonies in every particular; that the distinction between internal and external taxes was nonsense; that he voted for the repeal of the stamp-act, not because it was not a good act, but because there was at the time a propriety for repeal-

ing it. He repeated the remark that the galleries might hear him, and after that, he said, he did not expect to have his statue erected in America; in all which Grenville fully joined him. This temper soon took the form of acts, and turned the late joy of America into mourning. The quartering of large bodies of troops in the chief towns, and requiring large sums of the colonies for their support, filled the people with indignation. The object was perfectly understood, it was to check the spirit of the people and reassert the right to tax the colonies. These troops made war against liberty poles, and stopped respectable people in the streets of Boston and New York by rude questionings, and committed them to the garrison for refusal to answer, on the ground that these cities were garrisoned towns. The legislature begged to be excused from raising this provision to support British troops, and for this offence the legislative power of New York was abolished by an act of parliament until they should make the provision. They did submit and voted the supply required. The British troops had been provided for out of the public moneys by the governor and his council in Massachusetts, and when the legislature met they remonstrated upon the unconstitutionality of the act, with great firmness and dignity. These military preparations were but the forerunners of other acts of British taxation, and soon certain duties were imposed on glass, white and red lead, painters' colors, tea and paper imported into the colonies. This act was to take effect the 20th of November, 1767, and to ensure its enforcement another act authorized the king to appoint a board of trade to reside in the colonies to execute their duties under the law. They were authorized to search and seize at their discretion, with authority to call in the aid of the establishments, military and naval, within the colonies, and were exempted from prosecution in the king's courts for anything they might do under their commission. To these and other acts the colonies answered by petitions, memorials, remonstrances, and addresses, to the friends of liberty in the mother country, blending them with the strongest sentiments of loyalty and the expression of hope that these acts would be reconsidered and repealed. The people of Massachu-

setts entered into a league not to import from Great Britain, or use any articles taxed, except such as were of absolute necessity. The legislature issued a letter inviting a concurrence of all the colonies to procure a constitutional repeal of these acts and remove the grievances from which all were then suffering. Dissolutions of colonial legislatures followed to swell the measure of their wrongs. The people suffered from this privation of the necessaries of life, but they kept their fortitude like martyrs. All were animated by feelings of patriotism and self-denial, and this spirit prevailed and carried us through the Revolution in triumph. In a short time we ceased to speak of Britain as "our kind and indulgent mother," and progressively we called her our "unnatural parent," "proud and unrelenting tyrant, etc." The contest culminated in the assembling of the thirteen colonies at Philadelphia, the 4th of September, 1774, to take united measures to redress these grievances. Here came together the foremost men of the time to mingle their counsels in the first Continental Congress at Philadelphia. The assembling of this congress was practically a dismemberment of the British empire. At least its mutual and decided action soon gave us independence.

Peyton Randolph, Richard Henry Lee, George Washington, Patrick Henry, Richard Bland, Benjamin Harrison, and Edmund Pendleton were the Virginia delegates to the first congress; and men of like standing represented the other colonies in that great assemblage. John Jay, William Livingston, John Dickinson, the author of the Farmers' Letters, the Rutledges, and John and Samuel Adams enlightened its councils. Here these great Americans first met, though their names were familiar. Mr. Henry was first to open the solemn sitting, and it has been said that this added to his extended fame. No reports ever got abroad of the speeches that were made in these revolutionary congresses, as they sat with closed doors, in secret conclave, and with an injunction of secrecy. Suffice it to say, that Chase, after hearing Henry and Lee, said to a colleague, "We may as well go home for we cannot be needed with such men." We know that these were pro-

tracted sessions, and all the questions were fully considered and debated in the committees and on the floor, and Henry spoke freely and wrote the address to the King, which was recommitted and afterward revised by John Dickinson to make it more acceptable to those who did not hold so advanced a position as Henry in reference to the rights of the colonies. We gather from the diary of John Adams that Henry held the most advanced position in that congress. Adams says that Henry thought that the Rutledges, Jay, and Galloway would ruin the cause, and regretted that he was not able to say what he thought of their course. This diary is very imperfect, and it is evident that the author dotted down only such things as he cared to remember, and hence it cannot be regarded as reliable evidence of all that was said in the congress. However, John Adams placed Richard Henry Lee and Patrick Henry among the three great orators of the first congress. Henry was made chairman of the important committee on the king's address, and spoke and acted a leading part in that body of distinguished men. The Adams diary shows that he regarded the government as dissolved. He alleged that we are in a state of nature, and he said, "I go upon the supposition that government is at an end, and that we are thrown into one mass." Jay said, "I cannot think that the old government is at an end. The measure of arbitrary power is not full; it must run over before we undertake to form a new constitution." He also appeared as a member of the second congress. The writings of Adams, made at the time, show that he and Henry were cordial and advanced patriots. Before they left this congress Adams read Henry that letter of Hawley's in which he said we must fight, to which Henry exclaimed with emphasis, "By God I am of that man's mind." Adams said he regarded this as a solemn asseveration on the part of Henry of fidelity to country; and this verifies also the speech of Henry made in the house of burgesses 20th of March, 1775, in favor of arming the militia, in which he said "I repeat it, we must fight." He, at this time, brought forward the proposition to put Virginia into a state of defence, and that a committee be appointed to procure arms and discipline such a body of men as may be sufficient for that

purpose. He declared that a well regulated militia, composed of the yeomen of the land, is the natural strength and security of a free government, and that such a body would render it unnecessary for the mother country to keep among us any standing army of mercenary soldiers. This measure produced alarm and deep solicitude, and Bland, Harrison, and Pendleton, who were lately in congress, and Nicholas, sternly opposed the resolution to arm. This preceded the engagements at Lexington and Concord by a month, and it was quite natural that it should be stubbornly resisted; yet the measure was carried to adoption through the great power of Henry. Indeed, the only fragment of his revolutionary eloquence that has floated down to us has been recovered by Wirt from the traditional speech he then made, and which he ended with, "Give me liberty or give me death."

We have sought information from the best sources of Virginia as to the history of Mr. Henry, and Mr. Hugh Blair Grigsby has written us to this effect:

"Of the origin of this speech I know nothing; but as I am familiar with the facts and the men of that time, and of a somewhat later day, I will give you my impressions. Henry did speak on the occasion. He did make a speech which carried his plan in opposition to the scheme of Col. Nicholas, who was not only one of the first men of the colony, but was upheld by the ablest men in the house, most triumphantly through; and he did use the words "Give me liberty or give me death." But there was no such thing as the publication of a speech at that day, nor even a newspaper in Richmond at the time; nor did Henry ever write out a speech in his life; and the speech of Henry appeared, so far as my researches go, for the first time in the life of Henry, by Wirt. I believe its origin to be this: Judge St. George Tucker, of Williamsburg, who took an active part in the revolution, was intimate with the members who heard Henry's speech. The Judge was an elegant scholar, and a lover of eloquence, as well as an ardent patriot, and had doubtless heard from various persons an outline of the real speech, and some of its most striking passages. I also believe that Mr. Wirt had heard very faithful accounts of the speech and many of its points and expressions, and it is from the joint recollections of these two gentlemen that the present meagre draft of the true speech was made. That the real speech was an extraordinary effort may be inferred, not only from the statements of those who heard it, but from the vote of the house which rejected the admirable

scheme of Col. Nicholas, and adopted the temporary plan of Henry. The speech, as we now have it may be said, in the phrase of Dr. Johnson, to be rather an 'adumbration' of the speech, and a very faint and shadowy one it is, rather than the true speech itself. There is no doubt that its outline is just, and that some of the expressions and phrases of the true speech are retained, more especially its famous concluding words."

It has been said by some writers that Henry finally opposed the Declaration of Independence. This has been based on a letter written by Gen. Charles Lee to Mr. Henry, in which he alludes to a conversation with Mr. Henry, of a prior date. Upon a careful study of this matter it is found that there is nothing contained in the letter to sustain the conclusion. Mr. Henry thought it of the greatest importance that we should sound the French court in particular before England had done so, and for this purpose he would delay the declaration; yet being assured that these steps had been taken, he not only voted but spoke with all his usual earnestness in the house of burgesses to instruct the Virginia delegates to move the declaration of independence in the congress of 1776 without further delay. Henry's letter to John Adams, dated May 20, 1776, says: "Before this reaches you the resolution for finally separating from Britain will be handed to congress by Col. Nelson. I put up with it in the present form for the sake of unanimity. 'Tis not quite so pointed as I could wish. Excuse me for telling you what I think of immense importance; 'tis to anticipate the enemy at the French court. Excuse me again, the confederacy—that must precede an open declaration of independence and foreign alliances." Mr Adams, in his reply, says: "I esteem it an honor and a happiness that my opinion so often coincides with yours. It has ever appeared to me that the natural course and order of things was this: for every colony to institute a government, for all the colonies to coöperate and define the limits of the continental constitution, then to declare the colonies a sovereign state or member of confederated sovereign states, and last of all to form treaties with foreign powers." On the 20th of April, 1776, Richard Henry Lee wrote Mr. Henry a letter, now possessed by the

Henry family, expressing substantially the same views, and to which Mr. Henry made answer, using this language: "Your sentiments as to the necessary progress of this great affair corresponded with mine." So far, then, from his being opposed to the declaration, he appears to be in entire accord with the great leaders in the old congress who moved the declaration of independence and the committees for confederation and the making of treaties. Richard Henry Lee, who moved the resolution, and John Adams, who seconded it, and who was the great advocate of that measure, were in correspondence and coöperation with Patrick Henry at the time, and they were all concurring in this great revolutionary step prior to, and at the time of, the declaration.

Mr. Henry, who moved the resolutions against the stamp-act in 1765, who, in March, 1775, caused Virginia to be put in a state of defence, and who early led a Hanover company to recover the powder taken by the royal governor against the protest of many patriots, who was finally appointed by the Continental Congress the first colonel of the Virginia forces, did not shrink back in this crisis, but advanced at the very head of the sons of liberty, and maintained his patriotic leadership as governor of the State from 1776 for three successive years, during which period he was three times chosen governor, and then declined a reëlection because a constitutional restriction prevented, in his judgment, his holding the place any longer. He was afterwards twice elected governor of Virginia, and served in the burgesses also. However, he in a measure withdrew from politics for a period to engage in the practice of his profession, that he might repair the drains made while governor upon his meagre resources. He thus put his household beyond want and preserved his own independence, and it is believed he would have been drawn more to federal politics had it not been quite imperative that he should still pursue his profession after he had acted so long as the first chief of the state. Virginia governors did not then become richer by their high office; it was not then an age of degeneracy among public men.

The next great event in the life of Mr. Henry was the

adoption of the constitution. He appeared as a delegate in the convention called at Richmond to ratify that instrument, in behalf of the state of Virginia. Hither came James Madison, one of its framers, to champion it through the convention, and he was greatly aided by John Marshall, Edmund Randolph, Henry Lee, Nicholas and Pendleton. Henry, George Mason, Monroe, Grayson and Harrison opposed the ratification of the constitution. When that convention assembled there were some fifty majority for the ratification; and Virginia finally gave ten majority for the adoption of the constitution, after adopting a long bill of rights and recommending that a convention be called to ratify certain amendments to that instrument. In this great struggle Mr. Henry certainly led the opposition, and was the foremost speaker in the convention. He made five set speeches, besides engaging daily in running debate. Madison spoke about as often, but he was an indifferent orator. One gentleman who voted to ratify said that Henry had produced in his mind the greatest apprehension, and it must be allowed that Henry advocated a desperate cause in endeavoring to defeat the constitution. He pointed out its defects, and made them seem flagrant indeed; but many of his apprehensions have become already realized, especially that the federal government would ultimately abolish slavery in the States under the war power. At the end of eighty-five years it was accomplished. Our sympathies are on the side of the constitution, but we allow that Henry came nigh defeating its adoption on the part of Virginia, although it was most ably sustained by several speakers, including Madison, one of the fathers of the constitution as well as one of the writers of the Federalist, together with Marshall, who was destined to become its ablest exponent as chief justice of the United States. One of Henry's great objections to the constitution was that it quite abolished the powers of the states and left us a federation of states no longer. He contended that it would become a consolidated government. This view of the system explains why he reappeared in public in 1799, at Charlotte Court-house, after years of retirement, to denounce the

Resolutions of 1798; and at the urgent solicitation of Washington he allowed himself to be chosen to the legislature for the sole purpose of carrying a repeal of those resolutions on behalf of Virginia. Certainly the fact that Henry had opposed this measure produced the greatest alarm if not consternation in the Jefferson party, and they caused a host of clever men, led by Madison, to be elected to sustain these resolutions in that body. But death saved the resolutions from the scathing denunciation of the roused lion. The State Rights party began to villify Mr. Henry, and claimed that he was an apostate from their cause, when in truth he never held the constitutional views of this new party of Virginia. He opposed the constitution because it was, in his judgment, a consolidation of the government, and after that instrument was carried, with its ten amendments, he had no idea that under its operation the states could claim to be the final interpreters of that instrument. So Mr. Henry repudiated the heresy, preserved his own consistency, and threw the weight of his character against the disorganizing measures of Thomas Jefferson. Had he lived, the great Virginian would have made Jefferson repent the resolutions of 1798, but he was not allowed to fill up the measure of his greatness, which would have redounded to the good of his country. The patriot that braved the minions of George the Third did not fear to encounter the hosts of misinterpretation in Virginia, led by Thomas Jefferson, to the direct overthrow of the constitution itself. Henry, like Washington, saw the danger arising from these doctrines, which in no small measure induced nullification in 1830, and secession of eleven states thirty years afterwards. Virginia planted, the seed in '98 which grew into the bitter fruits of the late war.

But the fame of Henry is mainly connected with the Revolution, in which he took the lead. He early believed that the mother country would force the colonies into war, and, without foreign aid, perhaps into subjugation. He said to his friends, in 1774, "I believe that war will come and we shall ultimately win our independence through the assistance of France, Spain, and Holland, because it will be for their interest

to help us." Mr. Jefferson said it was Henry that kept us united; and in Virginia, we could not have got on without him. Certainly he was the indisputable leader of the revolution in Virginia, and his course inspired the heroes of that age with the fervor of unyielding patriotism. It may be allowed that he was on the wrong side in resisting the adoption of a more perfect union, and yet we must pardon something to the spirit of liberty and the age in which he lived. His associates opposing the constitution were such patriots as Mason, Monroe, Luther Martin, George Clinton, Hancock, and Samuel Adams. No one doubts their patriotism, though we may say that they did not then so well comprehend the evils of the confederation as Washington, Hamilton, Madison, Jay, and the Pinckneys of South Carolina.

That Henry was a consummate orator we readily believe. Indeed, a condensed epitome of his life can leave no doubt that he was nature's orator in the full sense of that word. No one ever heard him without awarding him this eminence in oratory. Others may have surpassed him in learning, and in strict logic, but he never met his peer in genius and the impressiveness of his eloquence. Jefferson said in his memoir:

> "I attended the debate, however, at the door of the house of burgesses, and heard the splendid display of Mr. Henry's talents as a popular orator. They were great indeed, such as I have never heard from any other man. He appeared to me to speak as Homer wrote." He said to Mr. Trist the last two years of his life, that "it was to him we were indebted for the unanimity that prevailed among us. He would address the assemblages of the people at which he was present in such strains of native eloquence as Homer wrote in. I never heard anything that deserved to be called by the same name with what flowed from him; and where he got that torrent of language is inconceivable."

Such praises came from the learned and the common people alike; and this is what Cicero pronounces the true test of a great orator; no speaker can stand this test but a true orator, such as Mirabeau, Chatham, and Henry among the moderns. Look through the long list of college men, and how seldom can you find among them all a first class orator. At

least there must be native, original, and life-giving power in every genius that survives the leading strings of the schools. How few of the highest educated men that can be pronounced among the first orators; nature needs help; but the orator is born as well as made. Chatham, Henry, Clay, and Webster were native products. They were the pure gold, and only needed the smelter's and the finisher's touch. Indeed, it is supposed that Henry owed less to his education than any of them; at least, he knew less of books than even Henry Clay. He opened the great book of nature and read the heart of man, and addressed every sentiment and passion.

No speech of Henry's comes to us complete; and we judge him by what he left and his undying fame. He never corrected or sought to rescue his speeches from oblivion. He spoke for his cause and thought not of himself. His inspiration never conned over the past. He looked straight at the future. He, like the eagle, turned not his eye whence he had flown along the crags to the highest peak. He may have tripped on the wing, but his passage was at times sublime. He never fell below the conception of his subject. He had the action and pathos of great eloquence. His voice trilled to every sentiment and passion of the soul, and the impressiveness of his speech fixed his hearers with his own spirit. Such is our conception of Henry as an orator, that we may say with Jefferson that none approached him in his great moods but John Adams.

We admit that the speeches upon the constitution and upon the British debts, which are mere outlines of his speeches, contain none of those splendid passages of eloquence, still they are not unworthy of a great speaker; and they show that he, like Clay and Webster, mastered his subject. Those speeches, which produced such an impression in the convention, are able and have a style of a high order. They abound in noble sentiment, and are clear, vivid, impassioned, concise, and dramatic. The sentences are simple, incisive, and frequently abound in interrogation, which characterizes all impassioned debate. But these speeches, as they are reported, raise rather

than satisfy expectation. They hold a high place in deliberative eloquence, yet they are not equal to the fame of Henry; and we know they were imperfectly reported, and never revised by him, as has been the case with many great speeches of modern times. The finer passages are nearly lost, as we know by the testimony of his contemporaries who heard them.

John Adams, the collossus of debate on the Declaration, was a great speaker, and yet we are not aware that even one fragment of all his speeches survives to show us the character of his eloquence. We judge him by his writings, and the effects he produced as an orator. So Henry has left us five or six speeches imperfectly preserved to verify his fame as an orator, while he wrote nothing but his messages that exhibit his talents; and we must in a great degree judge him as an orator by his fame and the marvellous effects he often produced as an orator from his first appearance in the Parsons' cause to the end of his career, whether he appeared at the bar or in public bodies like the old congress or the burgesses. We also fall back on those wonderful unreported speeches, whose fragments have floated down to our day, and the common fame of Henry in his own age, which assign him the highest place among orators. He seemed to have the conception of the poet combined with a delivery if possible equal to his fancy. We shall not attempt to describe Henry as a thinker farther than to say that, in the opinion of competent critics, who have studied his messages as Governor of Virginia as well as his correspondence, his writings will compare favorably with those of the very best of his contemporaries. Such is the opinion of Mr. Grigsby, of Virginia, and we must say that we have not read those writings except as they are embraced in the life of Henry, but should always think it safe to award the first place to Franklin and Jefferson of the pre-revolutionary period.

Dr. Alexander, who wrote his reminiscences of Henry in 1850, concurs in saying, from his observations of Henry and the American orators covering this period, that Henry was an extraordinary and consummate orator, and verifies the manner of his speaking and the power of his eloquence, and that they

e due to his emotion and passion, accompanied by a atility which enabled him to assume at once any emotion assion which was suited to his ends. Not less indispensa- was his matchless perfection of organs of expression, ading voice, intonation, pause, gesture, attitude and scribable play of countenance. In no instance did he lge in an expression that was not instantly recognized as ral; yet some of his penetrating and subduing tones absolutely peculiar, and as inimitable as they were in- ribable. These were felt by every hearer in all their e. His feelings were sometimes indicated and expressed long pause, aided by an eloquent aspect and some signifi- use of his finger. Henry owed much to his insight into eelings of the common mind. In great cases he formed stimate of the jury, and made his appeals to their pre- tions and character. He addressed the court with pro- d respect. Dr. Alexander, hearing him in 1794, in nce of three criminals, declared that his manner was that he felt an instantaneous sympathy with his cause, it was felt by every hearer.

Mr. Henry was above the common height, and in later s there was a slight stoop of the shoulders, but when nated he always straightened to his full stature. He wore own wig, and sometimes a scarlet coat, according to the ion of the day, though, usually, his dress was black, and n, and sometimes negligent. His features were strongly ked, and his complexion dark. His eyes were a hazel, or ue grey, as the shadows fell upon his face, for they were ll and deep set. The expression of his face was one of mnity. Dr. Alexander says that he knew his sister, Mrs. edith, who was the finest conversationalist he ever met ng ladies, and who had a native eloquence equal to Henry self. So, if we go back to Dr. Robertson, the historian, down to his kinsman, Lord Brougham, and his cele- ed nephew, Wm. C. Preston, of Carolina memory, we over that there is a native eloquence in the Henry family ping out during the last century, scarcely inferior to that of Pitts and Foxes of English renown. So we trace the native uence of Henry, and so we need not be amazed at the

strains of his untaught eloquence, for he was not an orator like Fox, after a long training in debate, and in spite of nature, as Pinkney said. Eloquence ran in his native wood notes. It ran in his blood, and burst out on the first occasion.

Henry was the man of the people. He sprang from and adhered to them. He stood by them and they by him. He was the most popular man in Virginia in a revolutionary age, and his popularity remains undiminished to this day. He was always a sincere republican and undaunted defender of liberty. George Mason and Henry led the Spartan band of Virginia, though Henry was an Athenian in eloquence. Mr. Jefferson was never so democratic in his sympathies and tastes. Henry even spoke against Jefferson's foreign tastes. His sturdy love of country and of mankind animated him through all his career, and thus he was an inflexible republican in character, who, like Brutus, would drive out every tyrant, and banish the Tarquins all. So his fame is peculiarly American, for he declared at the opening of the first congress, "I am no longer a Virginian, I am an American."

Henry was five times elected governor of Virginia, delegate to the first and second congress, delegate to the convention to ratify the constitution; declined to act in the convention that framed the constitution, also the office of United States senator; and refused the offers of foreign minister, secretary of state, and chief justice of the United States, by Washington. So the estimate of the people and of public men of that age leave no doubt that Henry was admirably qualified for high places in the government; but when he finally retired from his profession, in 1794, he sought only the repose of domestic quiet.

Such is but a faint sketch of this the great leader and orator of the American Revolution, whose virtues are still radient, and whose fame is undiminished at the end of the first century since the dawn of that Revolution. He only needed to have acted more extensively in the national councils, to have left a great and enduring fame among men; for, like Henry Clay, he had all the qualities of a great statesman as well as a great orator.

NOTICES AND CRITICISMS.

EDUCATION.

English Literature, considered as an Interpreter of English History. Designed as a Manual of Instruction. By HENRY COPPEE, LL.D., President of the Lehigh University. 12mo, pp. 448. Philadelphia: Claxton, Remsen & Haffelfinger. 1873.

DR. COPPEE considers the literature of England as an exponent and interpreter of its history, and advances the general principle, "that the life and literature of a people are reciprocally reflective." This method of treatment is shown in the subjects of the several chapters, as, "Literature a Teacher of History," "Chaucer and the Early Reformation," "John Milton and the English Commonwealth." It is true, as the author remarks, that "merely to establish this historic principle it would have been sufficient to consider the greatest authors, such as Chaucer, Spenser, Shakespeare, Milton, Dryden, and Pope," but it appears to us an inadequate treatment of these authors to consider them merely as illustrating any principle. They were living men—great men, as well as great authors—influenced by the character of the age, it is true, and leaving their impress upon it. Yet they are to be considered first in themselves and their writings, and secondly as exponents of their times. Literature is a teacher of history, and something more. As the poet and philosopher are greater than the chronicler, and Calliope takes the precedence of Clio, so literature, while it explains and illustrates history, has a higher value in itself.

The author seems to be aware of this, for he says that, while keeping this principle in sight, he has endeavored to give a connected view of the course of English literature for the use of students. But we could wish that, for their benefit, the historic theory had left more space for personal record of the great lights of literature, from which the young often draw most instruction and inspiration. The poetry of Chaucer is regarded by Dr. Coppee as "particularly fortunate," for his theory and instructive lessons are drawn from it in regard to the social condition of the English people, the changes in government, and the condition and progress of the English language. Much stress is placed upon the connection between the prose works of Milton and the political history of England; but in the discussion of his poems our author seems to entirely forget his theory. In fact,

nothing could be further removed from the times and circumstances in which they were written than Milton's poems. They are emphatically for all time. In Spenser's "Faery Queen" Dr. Coppee affects to find, not only symbols and allegories of the several virtues, but of the Virgin Queen and of English history in general. Shakespeare he cites as the writer whose works illustrate his position most strongly; yet he fails to draw any of these illustrations from the writings of the "myriad-minded." The historic theory is thus found to be neither so new nor so important as we were led by the preface to expect; yet it serves as a chain of association to bind together authors and periods in literature and morals as well as history.

Dr. Coppee's estimates of character and merit are generally just and accurate, although neither profound nor striking. He does not attempt to reverse the general verdict already passed upon English writers, and seems to have few favorites to praise or foes to disparage. But in some instances there is a lack of discrimination, and looseness in the use of terms. Thus, of Moore, he writes: "With a *foolish* lack of judgment he lost his hopes of preferment by writing satires against the regent." What is implied in a "foolish lack of judgment" we will not attempt to say. If such a thing exists, we might reasonably suppose its opposite, a *wise* lack of judgment, but this only leads us further into the labyrinth. This "foolish lack of judgment" consisted in writing satires against the dissolute regent, by which folly "he lost his hopes of preferment." Would the author have us infer that, if the poet had been base enough to fawn upon the profligate in power, he would have exhibited more wisdom? Again, in his comparison of Moore and Burns, he writes: "The one was polished and musical, but artificial, and *insidiously immoral;* the other homely and simple, but powerful and effective to men of all classes in society." When our author writes such a sentence, he challenges comparison on the scale of morality between two justly popular poets. This is the first occasion upon which we have seen Burns mentioned as a model of morality, in contrast to Moore. If the writings of the latter are "*insidiously* immoral," what can be said of both the *life* and writings of the former? The difference can only be that between one who is "insidiously immoral" and one who is *openly* and confessedly so. In a work designed for students, it is especially important that false impressions should be avoided.

Such may also be easily drawn from the article on Dryden, in which our author, in his anxiety to establish the historic theory, gives undue prominence to the poet's personal history and religious opinions. It is not these which now most concern the world; it is his poetry—not merely nor mainly as indicating changes in govern-

ient or the poet's religious convictions; which is to be set before the udent of English literature. Thus we find that this chapter entirely ils to indicate the character of Dryden's writings.

We notice occasionally a form of expression which, we think, Mr. oppee himself would readily criticise. Thus, referring to Mrs. rowning, he writes (p. 434): "After a happy life with her husband id an only child sent for her *solace*, this gifted woman died in 1863." 'e have always supposed that grief and sorrow were to be solaced, at we cannot conceive why this worthy lady should need solace r a "happy life with her husband" (!) The writer has also taken the berty of using some words such as "hyperlatinism" (p. 300), which, e judge, will scarcely be able to obtain recognition in dictionaries of ie language. Yet, notwithstanding defects in expression and errors i judgment, such as we have pointed out, we find much to commend i this work. It is impartially written and evinces a large acquaintance with the subject, which is much more than we have been ble to say of most works of the kind which we have lately examined. 'o this we need hardly add that we recommend "Coppee's English literature," for if it has some defects they are such only as can e easily remedied in a new edition. The work would then be as satisfactory as "Elements of Rhetoric" and "Elements of Logic," by the same uthor. But as it is it may be more safely and profitably studied in ur schools than three fourths of the similar books which the parties nterested declare superior to all others.

Catalogue and Circular of the Gannett Institute for Young Ladies. Chester Square, Boston, Mass. 1873. 16mo, pp. 36.

We sometimes find more that is instructive in a catalogue than in many a pretentious book, and that now before us is an agreeable example of such. We have remarked more than once, in our discussions of the relative merits of colleges, academies, and schools, male and female, that the style of the catalogue is generally, if not invariably, a very good criterion whereby to judge of the institution which it represents. It is certainly a correct one in the present instance. Presently we will extract some of its maxims and suggestions, because they are such as teachers and parents in general, as well as students of both sexes, may profit by.

But let us mention, first, how we became acquainted with the Gannett Institute. For years, indeed, we have been in the habit of hearing it highly spoken of by those of whose competency to judge of its merits there could be no question. It has also been our privilege to meet, from time to time, incidentally, some of its *alumnæ*. That is,

we have heard the best reports of the tree, and seen sufficient of its fruit to satisfy us that those reports did not exaggerate its real worth. Further than this, we knew nothing of the institution until our last visit to Boston, some two months since.

Happening to meet an old friend who has a daughter at the Institute, his first proposition is, that we accompany him to see it. Quite enthusiastic in his admiration of the school, he assures us that we cannot fail to be pleased with its system. We remind him that heads even of male colleges are sometimes unwilling to allow their pupils to be seen by the profane eyes of reviewers. "Never mind that," he says, "we have no *Provost* in Boston—'no such person'!" We cannot hesitate any longer, but get into a car with our friend, and are soon at Chester Square. Many of our readers are aware that this is one of the most beautiful locations in Boston. The chief building of the Gannett Institute was erected expressly for the purpose of the school; to this, it need hardly be added, that it has all the modern improvements and conveniences. The recitation and study rooms and lecture halls throughout the whole establishment are spacious, where spaciousness is required, well ventilated and well lighted, scrupulously neat, and heated by steam.

On our being announced, the Rev. Mr. Gannett waited on us promptly, and received us in that cordial, frank manner, characteristic of the accomplished scholar and the experienced, successful educator. Mr. Gannett does not seem the less cheerful, the less brilliant in conversation, or the less willing to allow his system to be seen in operation, for having grown gray—as white as snow—in the class-room. Without the slightest hesitation he invites us to the class-rooms. We express fears that our presence may cause interruption, but although Mr. Gannett also was aware of our experience with the University of Pennsylvania and its learned Provost, he assured us that far from having the least objection to our presence in the class-rooms during the recitations, both professors and students wished us to be present. We then readily availed ourselves of the privilege, and such emphatically it proved to be. Mr. Gannett politely accompanied us from one class-room to another, until we had heard several recitations in as many different departments of study, including those of literature, science, and art.

Our readers are aware, we trust, that it is not our habit to indulge in superlatives. We do not think it necessary to use any inflated language for the purpose of expressing our approbation even of the system of education which, with its results, pleases us most. And had we been pompous all our life we should have felt called upon, in this instance, to lop off every superfluous word, and assume that chasteness of style, if we never had it before, which is the truest test of culture. For here there was nothing sensational, no excitement, no con-

ion, no display. The young ladies of each of the various classes we answered the questions proposed to them by their instructors as nly and with as easy a grace as most matrons, having the combined antages of liberal culture and good sense, converse with each other he drawing-room. In short, never have we been more forcibly re-ded, than we were during this visit of two or three hours, of the le maxim of Cicero, which regards culture as the divine food of nanity: *Animi cultus quasi quidam humanitatis.**

Previously, we had been permitted to be present at the recitations he principal male institutions of Boston and its vicinity, including se of Harvard University; and now that we had heard those of the ncipal female institution of that city, we confess that we were still re willing than we had been in the past to acknowledge that the m of the capital of New England to be regarded as the modern ens in education as well as in literature, science, and art, has a d foundation. This we can justly say without any disparagement he other excellent female institutions in New York and elsewhere, ncluding the very best—to whose class-rooms we have been invited m time to time, and whose good works we have witnessed. Cer-ly we were reminded of some of these as we passed from one reci-on room to another with the Rev. Mr. Gannett. We thought par-larly of Dr. Van Norman's School, in this city, in its palmiest days, en it was located in Thirty-eighth street, before the principal intro-ed his new system of political economy, and still more forcibly, haps, did what we heard and saw at Chester Square recall to our d the excellent institution in West Fifty-second street, New York, sided over by Mlle. Rostan, one of the most accomplished and st successful educators of young ladies in this country.

We were not surprised, then, to find that some of the best in-uctors at Harvard College are also among the instructors at the nnett Institute. Thus, for example, the lecturer on Moral Science the latter institution is our old friend the Rev. Dr. A. P. Peabody, merly editor of the North American Review, but now, and for seve-years past, one of the faculty of Harvard. From the teachings of . Peabody alone we should have expected the most excellent results; we know no one who combines more of the highest qualifications an educator, especially an educator of young ladies. Passing to other department we find that the Professor of Elocution at Har-d is also the Professor of Elocution at the Gannett Institute. ile revolving in our mind how much credit is due to Mr. Gannett having secured the co-operation of such men in his great enter-se, we are conducted to another room in which we are introduced the Rev. N. H. Hudson, the well-known author of one of the

* *Fin*, v. 19.

best annotated editions of Shakespeare we have. A veritable treat awaited us here, for Mr. Hudson was just commencing one of his conversational lectures, to a large intelligent class, on his favorite subject—the great English dramatist. After receiving us with a friendly greeting, and expressing himself pleased that we should take an interest in his labors, he proceeded with one of the best specimens of the Socratic style of discussion it has long been our privilege to hear.

To find several men thus giving instructions in the Gannett Institute in the special branches in which they had attained high distinction would have gone far to account to us, by itself, for the superior culture which impressed us so forcibly as the prevailing characteristic of the school. And yet even Mr. Hudson scarcely acquitted himself on his favorite subject more to our satisfaction than two or three of the lady teachers to whose classes we were also made welcome.

Even these few remarks, desultory and hurried as they necessarily are, will, we think, show that the estimate we have given of the contents of Mr. Gannett's Catalogue has a basis of sound reason to rest upon. But, as is our wont, we let the catalogue speak for itself. In the first place, we think there is no sensible, intelligent parent who will not give a ready assent to the following :

"The idea has, we fear, become too prevalent that an expensive wardrobe is necessary for a young lady in one of our city schools. Such, however, is not the case; on the contrary, any attempt at fashionable display is, in our judgment, in bad taste, and tends most seriously to counteract the best educational influences. Simplicity and neatness in dress are the essential characteristics, and altogether most befitting the period and vocation of school-days."

Mr. Gannett's views as to the proper standard of education for women are in accordance with those of the wisest thinkers of both sexes—not in accordance with the new-fangled, vulgar theories which, by making woman compete with man in those occupations for which nature has evidently not intended her, would deprive her of the best of those qualities which endear her to us most, and are the chief source of her influence and power. It is needless for us to inform our readers that we fully concur in the following :

"The question relating to woman's sphere, social position, relative capacities, peculiarities of mental or physical organization, we do not propose to enter upon; they are often discussed by those *who do the least to promote her welfare*. One thing is certain, woman was designed to sustain important social relations; and in proportion as all her powers are developed and perfected, will she become useful, happy, and honored. It is evident, that all literature that is worthy of the name is adapted to the wants of woman; and that she, equally with man, is capable of appreciating and being elevated by it."

So, it will be remembered, we have always thought and urged.

And it will be seen that we have also the pleasure of being in accord with Mr. Gannett in regard to the classic languages as a means of mental discipline and culture. We are sorry that we can now only make room for the following passage:

"We are aware that there are not wanting those with whom antiquity has become the mark for indiscriminate abuse and proscription; but, in regard to the Latin and Greek, the fact is undeniable, that for centuries they have held supremacy over all other languages; and their dominion increases as civilization advances. The reasons for this are obvious to all who thoughtfully investigate the subject. In the whole circle of literature no other study can be found, which, *in itself alone*, is so effectual to give culture to the mental powers. In the study of the classics, the circumstantial and philosophical memory are in constant exercise. In rigid and accurate translation there is a continual requisition of the most subtle and scrutinizing analysis. Also, in translation, the habit of prompt, comprehensive induction is required—one of the most useful attainments of the human mind. But a still greater advantage in this study, and one which alone would fully justify all the expenditure of time and toil bestowed upon it, is its influence upon the discriminating faculty to which belong discernment, and those nice and subtle shadings of idea the perception of which is essential to exquisiteness of taste, beauty, precision and power of language. In translating from languages that have been developed according to the rules of perfect art, every word and every phrase calls this faculty into exercise. And who does not know that the variety of intellectual ability exhibited by scholars depends less upon difference of thought than of linguistic power" (p. 24).

Mr. Gannett would not, however, recommend the study of the ancient classics to all young ladies; only to those who evince some taste or apitude for them, and can afford to take a sufficiently long course. We had intended to give our impressions of the results obtained in the modern languages, as well as in natural philosophy, chemistry and the fine arts at the Gannett Institute, glancing in passing at its well selected library, its full sets of philosophical apparatus, and its handsome art collection; but we find that our remarks have already transcended the bounds we had prescribed for them. We can only add, therefore, that of the many seminaries and schools which it has been our privilege to visit in Europe and America for a period embracing more than a quarter of a century, not one has impressed us more highly, or afforded us more pleasure in two or three hours than the Gannett Institute.

We can now say that with one exception we have had the gratification of being present at the recitations of all the principal educational institutions of Boston and its vicinity. The exception is the Massachusetts Institute of Technology. This institution we have not yet seen, but from no educator have we received a more polite or more cordial invitation than from Dr. Kunkle, its learned and accomplished President. If only for the purpose of complying, as best we can, with the wishes of some of our readers in different parts of the country, who

have done us the honor of requesting our opinion of the advantages it offers, we shall gladly avail ourselves of this courtesy the next time we visit Boston, probably before the issue of our next number. Just as we form this resolution we are reminded of an incident in the history of ancient Athens. This we will briefly relate as not, we think, an inappropriate conclusion even to so brief a notice of what Boston has done, and is doing, for the cause that does most honor to humanity. When Athens was captured by Lysander, it was proposed in a council of the allies to reduce the inhabitants to slavery, to raze every house and turn the whole Athenian territory into a place of pasturage for cattle. The council was followed by a banquet, which was attended by all the generals; but it happened that a musician from Phocæa who had been invited to it, recited, either by accident or design, a few verses from the piece in which Euripides describes the humiliation of Electra, reduced by Egisthus to the condition of a slave, precipitated from a palace to a hut. The guests were so deeply affected by this touching portraiture of misfortune, and its striking relation to the humiliation of Athens, reminding all, as it did, of the glory of that city which had produced so many great works and illustrious men, that they unanimously changed their resolution and scorned to make such cruel use of their victory. *

The Logic of Accounts: a new Exposition of the Theory and Practice of Double-Entry Book-keeping, based in Value as being of two primary classes, Commercial and Ideal, etc. By E. G. Folsom, A.M., proprietor of the Albany Bryant and Stratton College. 12mo, pp. 443. New York: A. S. Barnes & Co. 1873.

We have endeavored to transcribe the whole of the extensive title of Mr. Folsom's work, but are compelled to abridge it for want of space. That upon the back of the book is "Logical Book-keeping," but, as this work is a "New Exposition," the author has deemed it necessary to include upon the title page a sort of explanatory index of its contents, and an exposition of its peculiar theory and claims. These are, further, "the reducing all exchanges to nine equations and thirteen results," all of which are "illustrated by examples and memoranda for students and business men." If one may judge of the extent of an edifice by the size of its portico, we may justly expect in this work a grand revolution in the whole science of accounts, or in what has not until the appearance of this volume been deemed worthy of that name, as we read in the preface that "the chief aim of the author has been

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* *Aulus Gellius*, 1, 17.

to *impart a science.*" But what is doubtless intended as the culmination of importance to this Alexandrine title is that it belongs to a work composed by the "proprietor of the Albany Bryant and Stratton College." We have frequently deemed it our duty to review the writings of teachers and college professors, and even of presidents and provosts of colleges, but we never until now encountered the *proprietor* of a college." "The Albany Bryant and Stratton College" is, it seems, the exclusive possession of the author of the present volume. We will endeavor to consider it in the light of this weighty fact.

First, we beg leave to remark that however impregnable may be the author's logic, his rhetoric is certainly not above criticism. We instance the following sentence, from the preface. "Hence is yielded a science so consummately perfect that, when rightly understood and properly applied, becomes the grand interpreter not only of the result of each and every value in exchange," etc. Also the following, from his suggestions to teachers: "Now, as the fifth chapter is not required until the student enters upon his second working, it may as well, and, perhaps, *had better*, be omitted."

Mr. Folsom's "new exposition" consists mainly in endeavoring to assign the reasons upon which is based the practice of double-entry book-keeping. The work begins with what he denominates a "radical analysis or definition of values." Value is divided into commercial and ideal, the latter including labor or service and ownership. Commercial value is subdivided into actual and evidential, and the latter into written promises and verbal promises; but in what manner a verbal promise is a commercial value, the writer forgets to explain (p. 15). Upon the difficult question of value, our author, endeavoring to follow Mr. Carey, concludes that "the relative value of things is to be determined by the amount of labor or capital required in their reproduction," which, at the best, is a questionable statement, both as a fact, and as to its manner of expression. Under the head of the exchange of values, Mr. Folsom derives his nine equations from the permutations of equality between ideal, commercial, and ideal and commercial values. From these he deduces the important result that "every business is destined always to culminate in one of *thirteen* ways." This is illustrated by a combination of scales which, the writer thinks, "beautifully symbolize our financial condition when we are at either of the three statuses" (p. 74).

As the object of this work is to give the "reasons why" of the art of book-keeping, we will quote that in relation to debit and credit, from which it may be judged how much light is thrown upon the subject: "*Value received owes value given.* This enunciation is given as the reason why value received is debited, and we believe it to be the true reason. For, if value received always implies equal value given, the relation being necessary to the conception of a transaction, it

follows that value received is dependent upon the value given, as the source of its production; and if the value so received be dependent upon the value given as the source of its production, it—the value received—owes, as a consequence, the value given, and is, therefore, debited" (p. 31). This is "logical book-keeping"!

The remainder of the work is mainly devoted to examples and memoranda as illustrations and applications of these "logical principles." But we are forced to the conclusion that, however beautiful may be this theory, and interesting its perusal—and we have found it so—its application to the practical business of life will be cumbersome and slow of adoption. Like phonetic writing, it would be very excellent if universally employed, but under existing circumstances we deem it of little advantage to the practical book-keeper.

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1. *Six Books of the Æneid of Virgil: with Explanatory Notes and Vocabulary.* By THOMAS CHASE, M.A. 12mo, pp. 338.

2. *C. Sallusti Crispi Catilina et Jugurtha: with Explanatory Notes, Lexicon, etc.* By GEORGE STUART, A.M. 12mo, pp. 328.

3. *The Eclogues, Georgics and Moretum of Virgil.* By the same. 12mo, pp. 318. Philadelphia: Eldredge & Brother. 1872.

ALTHOUGH it is quite generally conceded that "there is no royal road to learning," countless attempts are continually making to render that pathway less rugged, to remove obstacles and graduate its ascents, so that the pupil may advance *per gradum* to the loftiest heights, and enjoy the fruits of learning without the toil. Many of these attempts spring from a misconception of the object to be attained, assuming that it is, like wealth, to be possessed by the least possible effort, forgetting that just in proportion as certain points of difficulty are passed by or avoided the narrower is the field of possession in the domain of knowledge. The policy adopted by Cæsar in the conquest of Gaul is that for the student—to take complete possession of the country as he advanced, and leave no foe unconquered in the rear to cause trouble in the future. We are aware that there has been much room for amelioration of the concomitants of student life from the days of Horace, when the pupil started for school at 4 o'clock in the morning, with his lamp in his hand and bag of counters on his back, in order that he might return by the hour at which the modern pupil begins his day's occupation.

Too much pains cannot be bestowed upon the surroundings of study to render it attractive and agreeable, but in the matter of assistance too great care and prudence cannot be exercised lest the proffered

aid prove an injury. We do not forget the discouragements which beset the young tyro in the study of Latin, particularly in the cold plunge which is often taken direct from the simple reader into the polished hexameters of Virgil. His poetic style, figurative language, and metrical transpositions beset the pupil at once, and here is the field for the most judicibus assistance. This is the object undertaken in the first six books of the Æneid, by Mr. Chase, and in the Eclogues, Georgics and Moretum of Virgil, by Mr. Stuart. These, like other classics usually employed in schools and colleges, form a uniform series, very convenient in size and style, and neat in appearance.

The work of American teachers, they are in many respects adapted to the demands of modern American schools. They were intended to meet that demand and they fulfil the intention; but when we look for anything higher, an attempt to elevate this demand to a higher appreciation of the beauties of these compositions, and of the perfection of the language and the benefit of their study, we fail to find it. The indolence of pupils and the incapacity of teachers demand an easier pathway, and they have found it. Yet we do not say but that the present editors have undertaken their work conscientiously and have endeavored to supply the most needed information. At all events they do not seem to lack an appreciation of their own achievements. They announce these little volumes, with their "copious notes" and "*original investigations*," after nearly all the great scholars of the world have bestowed their labors for ages upon correcting the text and annotating these classics, with more sound of trumpets than they all! Thus, the editor of the Six Books of the Æneid says in his preface, "It will be seen that in addition to the results of my own *independent investigations*, I have availed myself of the rich stores which have been accumulated by successive generations of commentators. In all cases where I am indebted to any one, either for information or for felicity of expression, I have endeavored to give due credit."

The notes and vocabulary occupy about one-half of each volume. Certainly the former are sufficiently copious, and are useful in pointing out grammatical relations, unusual forms, etc. But, except in a few instances, these are such as the pupil with thorough drill upon the grammar would generally be able to ascertain for himself. But an important fund of information, which he would not find in his text-books, and which he would not seek unless called to his notice, is almost entirely omitted. The mythology, history, and fable with which the Æneid abounds, its illustrations of Roman character, customs and religion, offer a wide and rich field for the commentator; while the finished beauty of the poem itself, its highly figurative language and striking comparisons, are almost entirely lost upon the young student unless his attention is frequently called to them. But this is rarely done in these "copious notes." The vocabu-

laries also follow the same plan of making the crooked paths straight. Virgilian uses are explained and often an entire sentence quoted as illustration. This may prove an advantage in reading this author, but certainly not when a new one is taken up. We also notice some peculiarities in giving the principal parts of the verbs, which, as they appear to us, would be confusing to the pupil; but they may not prove so in the class-room.

To the Catalina and Jugurtha of Sallust the remarks do not apply to the same extent. The numerous references to various grammars will be of much advantage to the pupil if employed, and the information given in the notes is, as far as it goes, valuable.

It cannot be denied that this plan of making easy the pathway of the young pupil at this point may prevent discouragements, and create an interest in classical studies which will incite him to press forward into wider fields, and to endure more exacting toil. On the whole these works will compare favorably with others in the same province, and notwithstanding the faults which we have noticed will fill an important sphere in the class-room.

American Educational Readers, arranged and graded for the use of Schools. New York: Ivison, Blakeman & Taylor. 1873.

Our schools certainly ought to be in no need of readers, when nearly every week brings forth a new series, at least in name, which, after contesting the field by virtue of its alleged superiority to all predecessors, is obliged to yield to another and later claimant. Thus the "battle of the books" goes on, each gaining for itself such friends as their cupidity and the *liberality* of publishers may induce to take a part, while the book-makers alone profit from the contest, the books themselves soon passing out of sight, leaving the minds of the pupils in the sad condition of the field after a battle. It is a deplorable fact that these meretricious means have been employed to such an extent for the introduction of bad books that scarcely any other means seem to be available for securing an opportunity to test the merits of good ones. But when this opportunity has been secured, and the merits of a work or series tested and acknowledged by long experience, there is little occasion for making a change, merely as an experiment, or as is often the case, to gratify the ambition of booksellers to introduce new works, and thus to reap new profits.

We know that this is the view taken by our most experienced educators, and the embarrassment in their duties thus arising from the persistency of publishers and intervention of school boards is often very great—still more incalculable is the injury to the young minds

committed to their charge. Hence the arguments in favor of a new series of readers must be very great to justify their supplanting others equally or nearly as good. Thus we often speak of works as possessing certain merits, yet not recommending their introduction under these circumstances.

The American Educational series of Readers appears to us, upon the whole, superior to many works issued by the same firm. First, its appearance is announced somewhat more modestly than former issues, and the claims set forth upon the introductory page are not so comprehensive and pretentious, yet such merits as it possesses are by no means hidden under a bushel. These, for example, are the arrangement and grading of the several numbers of the series, and in each the attention of the teacher is called to the fact that it is the "one step in advance of the preceding number." We imagine that a well-informed teacher might discover that fact for himself. But, in what that one "step" consists, or ought to consist, lies the whole question in the arrangement of a series of readers. Of this, however, nothing is said. In the introduction to each volume we read: "The beauty of the illustrations is obvious to all. They are designed and executed by the best artists," etc., *ad nauseam*. The illustrations are, indeed, tolerable, and may perform an important part in the plan of picture teaching, but, if their beauty is so "obvious to all," we see no reason for the reader's attention being so frequently called to it.

The Primary, or First Reader, endeavors to teach the word, alphabet, and phonetic systems of learning to read, all at once, which, we apprehend, will result in confusing the pupil, and give neither system a fair trial. The picture method of arresting the attention and imparting instruction is both natural and progressive, and as an auxilliary to object teaching will be very effective. We notice one section, "The philosopher and the boatman," which, in an excellent little work of a similar character, "Oxford's Junior Speaker," reviewed in our last issue, was claimed as adopted and copyrighted. If more had been taken from that "Speaker" it would have been well for the "First Reader" now before us.

We have searched in vain for the paternity of this literary foundling, and are forced to the conclusion that it is the work of irresponsible compilers, and the publishers alone must be held responsible for its contents. This is an index to a phase of the book-making business, which in our opinion is not creditable to the publishers who engage in it, and which is an injury and injustice both to those for whom the books are made, and to compilers of intelligence and respectability.

BELLES-LETTRES AND HISTORY.

Alsace. Par E. About. 12mo, pp. 347. Paris: Haschette & Co. 1873.

The recent war between Germany and France, and its consequences, have drawn fresh attention to Alsace, which has long been the real ground of contention between the two nations. Its remarkable adherence to the cause of France, the devastations it experienced during the war, and its depopulation since, are among the most noteworthy phenomena of that memorable conflict. These facts, and the incidents connected therewith, are the basis of the work of M. About. It is needless to say that the subject is considered from the French standpoint, and that the author loudly commends the devotion of the Alsatians to France, and fully sympathizes with them in their detestation of the Germans. He does not hesitate to admit that the French are a conquered people; yet omits no opportunity of casting odium upon the conquerors; in some respects deserved, in many not. To him it is nothing less than the conquest of intellect by brute force; another inroad of the Vandals into the temples of learning and refinement. Doubtless there is much justification of this view to the French, but they seem to be entirely oblivious of the fact that Alsace has not always been an integral part of France. The latter endured for many years the severance from her body of the essentially French provinces of Brittany and Normandy, with a much better grace than she now shows in the restoration of Alsace and Lorraine to Germany. It is but little more than half a century since these provinces, with their German inhabitants, were annexed to France; yet the thoroughness with which they have become Gallicized is equally astonishing to the Germans and the world at large. Germany, having annexed the coveted province, finds herself in the case of the man who drew the elephant. The Germans of Alsace are more rebellious under German rule than were the French of Paris. Says M. About (p. 9):

"Tout le monde n'a pas visité l'Alsace; et ceux là mêmes qui l'ont traversée en chemin de fer ont pu etre clusês par la surface des choses. Dans tel ou tel village de l'Est, un aéronaute tombé du ciel pouvait encore, l'an dernier, se croire en Allemagne. Toutes les apparances concouraient à cette illusion: langue, costumes, types, habitudes, aliments, boissons. Ce jargon rude et lourd c'était bien l'allemand, personne rien doutait."

Yet he concludes:

"Avec leur sang, leurs mœurs et leur accent Germanique, avaient été les meilleurs Français de la France."

This fact the Germans themselves are forced to acknowledge, and find it the most difficult with which to deal. Having failed alike in applying force and reconciliation, their only resource is to allow the emigration of these people, and to fill their places with those more accustomed to the monarchial yoke, and this is itself defeat. As the author justly remarks, in this respect Prussian rapacity overreaches itself. The best security for a lasting peace would have been to make a neutral province between France and Germany. Instead, Prussia has made an enemy, aroused sympathy for France, and exposed her inability to obtain the allegiance of her estranged subjects.

The cupidity of the Germans is another subject of complaint. Each difficulty, like the main contention, can be adjusted only in France. As he puts it: "Les Prussiens ont été plus forts que nous, mais l'argent est plus fort que les Prussiens." "L'argent, toujours l'argent!" is the cry (p. 57). What man of letters can fail to sympathize with the writer as he returns to his library in Saverne and finds that his favorite authors are scattered and lost, and exclaims, in despair, "Chères livres: Je les aimais bien."

Speaking of this province, the place of his abode for many years, the author can only express himself in these words, for which the French language has no exact substitute: "Home, sweet home!" He describes its deserted state upon his return after the close of hostilities. The highways are unfrequented, and gay Baden is silent. Even gambling has become a burden, and the voice of the tourist is no longer heard in the land. Over all floats the emblem of subjugation, the black, red and white horizontal bars of the banner of the German confederation, while the voice of a fat, jolly German exclaims: "Monsié, vous n'etes en France."

M. About readily ascribes the result to the superior discipline of the Prussians, making man a machine, which he says is impossible in democratic France. Yet, with all their military mechanism, we might find another explanation in the fact that the German bayonets were supported by brains, and their discipline directed by education. France, on the other hand, defeated, turns to retrieve her errors and begin anew her political and military education. Bitterly, yet justly, he speaks of the indifference of Europe to the disasters of France, especially of those states which formerly enjoyed her favor and protection. No man with a spark of chivalrous feeling could behold unmoved the misfortunes of a nation so great, and to which civilization owes so much. The author's love for "la belle France," however, does not blind him to the faults of her ruler; yet he does not forget that at his last election more than seven million electors, including such men as M. Guizot, its glory, and M. Laboulaye, its delight, confided the destinies of France to the good pleasure of Napoleon III. In the following language is expressed as much truth upon this subject as we have seen

from any source. M. About thus sums up the character and errors of his sovereign:

"Il crayait à son étoile, à son génie, au canon de bronze rayé, au fusil chassepot, à la mitrailleuse de Mendon, à la supériorité d'une armée qu'il avait énervée lui-même en remplaçant les vieux reports du devoir et de l'honneur par un misérable interêt d'argent. Aigri, depuis quatre ans par son mecompte de Sadowa, et directement prorogué par l'intrigue des Prussiens en Espagne, il ne sut pas se contente d'une victoire qui laissait son prestige intact. Il se jeta tête baissée, et nous tous avec lui, dans une nouvelle aventure, ou la valeur de nos troupes ne pouvait contre-balancer ni la supériorité du nombre, ni l'armement, ni la tactique de l'ennemi. Cette guerre, etourdiment déclarée, fut conduite au début avec une mollesse et une irresolution qui livrérent nos armées, l'une apres l'autre, quand notre unique chance de salut était dans la vivacité de l'attaque."

These confessions, coming from an intelligent and patriotic Frenchman, are worthy of consideration as an aid to the solution of the question sprung upon the world by the unexampled success of Germany. Here we leave this interesting author, commending his work to all who desire vivacious and instructive reading upon a subject of recent and general interest.

Santo Domingo, Past and Present: with a Glance at Hayti. By SAMUEL HAZARD, author of "Cuba with Pen and Pencil." 12mo, pp. 510. New York: Harper & Brothers. 1873.

MR. HAZARD'S is one of those new books upon an old subject which are called forth from time to time by the varying phases of public interest. The general attention directed to Santo Domingo by the President's "pet policy," the visit of the United States commission, and, more recently, the Samana Bay contract have elicited much new information and revived a good deal that is old in respect to this historic Island. The author expresses himself surprised at finding how little was really known of it, and how few were the accessible books giving connected information in regard to it. Yet this land is one of the first in the New World trod by the adventurous Columbus, and which, having experienced in miniature the whole history of American colonization, slavery and revolution, now seeks to tread still further in the path of the Great Republic. The reason for the present condition of the Island Mr. Hazard finds in its past history. It has simply been the "victim of misfortunes," brought upon it by being successively the battle ground of the Spaniards and Indians, the Buccaneers, the English, the French, the Spaniards, the Haytians, and, finally, the Dominicans themselves.

Mr. Hazard joined the commission sent out by the United States

government to the island, and, having circumnavigated it, and traversed its length and breadth, he is evidently competent to speak of its present condition. He has also consulted the various works to be found upon its history, and this forms not the least valuable and interesting portion of his book. He thus gives his conclusions in regard to its importance:

"Santo Domingo, by its position and natural advantages, ranks first of all the beautiful islands in these waters; and though to-day impoverished and a beggar, yet she will prove, under proper care, such a precious jewel to the power that may be induced to take her under its protection as many kings would be glad to place in their crowns. Such is the peculiar formation of this magnificent land, that within its boundaries is found almost every variety of climate; while in the character of its soils and vegetation it is equally varied" (p. 2).

Columbus thus wrote concerning St. Domingo nearly four centuries ago:

"I swear to your majesties there is not in the world a better nation nor a better land; they love their neighbors as themselves, and their discourse is ever sweet and gentle, and accompained with a smile; and though it is true that they are naked, yet their manners are decorous and praiseworthy" (p. 7).

Yet, what a tale of the Spanish possession of this island is told in the fact, that in fifteen years from the landing of Columbus the number of these simple natives was reduced, by slavery and hardship, from one million to sixty thousand. The Spaniards, never relenting in their vocation of task masters, pushed these poor people to the utmost extremity, until, rendered desperate by their sufferings, a perfect saturnalia of suicide followed, so that from having numbered in 1858, sixty thousand souls, in 1514 the total number was reduced to fourteen thousand. Of this race, not one pure-blooded descendant exists to-day. This portion of the work is illustrated with numerous old cuts, indicating the customs of the natives and the rule of their conquerors. At this time St. Domingo city was noted for its splendor, while its port was the most busy one in the New World, but from a combination of causes, it, and the whole island, rapidly declined. The story of its varying fortunes and revolutions, the introduction of African slavery and its terrible results, the origin of the Buccaneers, the rule of Toussaint and the final establishment of the Republic of Dominica, are gleaned from its history by Mr. Hazard with an industrious, careful hand.

The Boucaniers (a name corrupted into *buccaneers*) were so called from their peculiar manner of roasting meat upon a *boucan*, while the name of freebooters which, in our time, has become corrupted into *filibusters*, was derived from their swift boats called *frei-botes*. There is much information of general interest and great variety to be found

in this work which will go far to give an intelligent idea of its past and present condition to those who have never visited this interesting portion of the globe, or made it an object of special investigation. Much of this information has already been given in the report of the United States commission which the author accompanied, but he gives in addition his personal impressions and experiences in the vivid manner of an experienced traveller, which considerably enhances the general interest of the volume. He joins in the panegyrics upon this land, "Whose every prospect pleases and only man is vile," and is deeply impressed by the noble bay of Samana, named by Columbus the "Bay of Arrows," and by the magnificently built but almost deserted city of St. Domingo, which, he thinks, wants only Yankee enterprise to send the pulses of trade once more along its old arteries. The writer thus records his impressions of Baez:

"President Baez is a courtly, pleasant man, of medium height and agreeable appearance. He speaks French as well as he does Spanish, but English only tolerably well. He seems perfectly frank. With the easy air and manner of a thorough man of the world, he impresses me as a perfectly upright man, and that seems to be generally the impression" (p. 215).

Yet Baez suffers the common lot of those who depart from the prescribed line of action. We have seen him represented in every shade of character, from the courtly gentleman to the dark tyrant who would sell his native land for gold. Our author thus corrects some impressions as to the climate of St. Domingo:

"Although there is much talk about the unhealthiness, I cannot find that St. Domingo city is ever anything but healthy; for, from the old historians down, every writer speaks of its healthfulness. In fact they have a joke here, saying, 'People die only of old age.' Certain it is that during our stay here the climate has been delightful, the nights being fresh and cool; and I am told there is no change in the summer except that the days are a little hotter. Our thermometer since we have been here at the palace has hardly varied a degree each morning, showing an even temperature each day at five o'clock A.M. of 64 degrees, while at mid-day it has not gone over 85 degrees" (p. 230).

We notice the following amusing description of the "common school system" in that island:

"I was much amused, however, while strolling through the place, by a visit to the village school, which was simply a thatched hut with earthen floor, where I found a number of children, of both sexes and of all colors, seated on stools around the room. Between each pupil I was astonished to find a game cock attached to a sort of perch; and on my asking the children for an explanation, they said, "Oh! they belong to the schoolmaster, who fights them on Sunday!" (p. 223).

The writer must pardon us for being "amused" at his expression, "between each pupil," but his vivid manner of description and the

interest of what he relates will compensate for inelegancies of expression. Although the arrangement of topics might have been more philosophical, as a whole his work will not fail to interest and instruct. It is profusely illustrated, and will form a valuable contribution to the history yet to be written of the western republics.

Mr. Hazard has added a list of works which may be consulted upon the history of this Island, and an appendatory chapter, with statistics, etc., in relation to its climate, seasons and lands, its population, finances, and future prospects. We do not expect that this will long remain the last work upon St. Domingo, but that its growing importance will attract a wider and more permanent attention; and although the field for the exercise of the talents of our politicians seems to be at present sufficiently large, we would gladly see a flourishing republic upon this favored isle.

Paris: Journal du Siége; Par MME. EDGAR QUINET. Précédé d'une Préface d'EDGAR QUINET. 8 vo., pp. 388. Paris: E. Dentu. 1873.

MADAME QUINET is the wife of Edgar Quinet, who, with Victor Hugo, Louis Blanc, and Schoelcher, was proscribed under the *peaceful* empire of Louis Napoleon. This lady writes with the vivacity of her sex, the national pride of the French, and the earnestness of an eye-witness. As M. Quinet remarks in his preface, this work was written day by day, upon the brink of catastrophes, in the midst of the bombardment. Book first, *L'Invasion*, opens with the "last hours of peace," upon the morning of July 15th, 1870, and sketches the progress of events from the entrance of the Prussians into France to the investment of Paris. The second, and main portion of the work, describes the author's experiences and emotions during the siege. But French patriotism sweetens all. We hear this refined lady exclaim, as she leaves the city upon its occupation by the Prussians: "*O nos beaux jours du siége! Nous nous séparons avec peine de notre pain noir, de pain de l'honneur*" (p. 338).

To her the black bread of Paris was sweeter than all the luxuries enjoyed by the prisoner of Chiselhurst. The remaining portion gives a glowing description of "Republican France" in those early days, but makes no mention of the commune and second reign of terror in Paris, of the crimes committed in the name of liberty. In this part of the work, and, to a less degree, throughout, we might make the criticism that the author draws her conclusions too often from individual instances of patriotism, courage, tyranny, etc. The Prussians were not all barbarians, neither were the French all patriotic and magnanimous. Yet this may be

pardoned to the narrowness of her point of view, and the feminine method of reasoning. One can but admire the spirit of genuine heroism and true devotion which is stamped upon every page, even though it shows, in some instances, what appears to foreign minds an undue glorification of *La Belle France*. Thus she expresses herself upon hearing that the Prussians have entered France :

"La France envahie! la France envahie! Est-ce moi qui écris ces mots? Le sol sacré souille par l'étranger. Les Prussiens en France? Est-ce vrai? est-ce possible? (p. 5).

It was true that the "sacred soil" was desecrated by strangers, and that the "sacred city" itself was to suffer desecration from the same hated foe. Yet, who can say, that in the centuries to come, France will not reap more real advantage from that invasion than Prussia? The writer truly says, "*La bravaure militaire est aussi naturelle aux Français que de respirer.*" Yet they have learned that military bravery is not invincible, neither is it the noblest quality of a nation, nor of the French nation. She expresses her opinion of the direct author of the war in the following strong language: "Il est l'incarnation des mensonges, des corruptions, des réactions, le gorand des despotismes européens et de l'agiotage" (p. 6). Much truth is contained in the following sentences, which the French people have now taken well to heart :

"Trois fois en un demi-siècle, la famille Bonaparte déchaine sur la patrie l'opprobre de l'invasion. Dix-neuf ans de servitude devaient aboutir au desastre des désastres : la violation du sol sacré que Jeanne d'Arc et la Revolution français avaient sauvé" (p. 8).

In the following words the author describes the thrilling scenes of those days in Paris :

"Desarmes! s'écrie Paris. Desarmes! l'heure des resolutions viriles est arrivee. Desarmes à tous les citoyens! Les manifestations grandes; la surexcitation est immense. Quatre mille hommes descendent les boulevards au chant de la Marseillaise, criânt: Ollivier a Cayenne! Une dépêche privée ajoute: Peuple tremble de colère. Il faut s'ettendre à tout." (p. 18).

Thus on through all the alternatives of courage, desperation, and despair, to starvation and sullen surrender, the author graphically describes in her journal some of the most memorable days in the eventful history of France. But more auspicious days have dawned for her.

1. *Twenty-sixth Annual Report of the Board of Directors of the Pennsylvania Railroad Company to the Stockholders.* Pamphlet, pp. 40.

2. *Annual Report of the Board of Directors of the Lehigh Valley Railroad Company to the Stockholders.* Pamphlet, pp. 35. Philadelphia. 1873.

THE first of these roads is generally known as constituting, with its branches and leased lines, the most extensive railway corporation in this country, and as the most favorable illustration of the tendency of such corporations to combination and consolidation as a means to the most efficient and profitable management. Judging from this Report of the judicious and honorable President, not only are the stockholders to be congratulated, but the people of Pennsylvania, and, indeed, the entire country, for the company's extended and enlarged means of developing their material resources and answering the ever increasing demand for transportation between the seaboard and the Mississippi valley. Pennsylvania is not only the keystone in the cordon of Atlantic States, but occupies a central position between the West and Eastern seaports. Hence the chartering and building of great railways and canals through this State is but "reënacting the laws of nature." These facts, even more than the energy and ability of the men who direct the works, have resulted in the magnificent railroad system of Pennsylvania.

Many facts and figures may be gathered from this report, telling in few words of vast combinations effected, and results obtained, which a few years earlier would have been deemed worthy achievements of a nation. Gratifying as these doubtless are to the stockholders, as evincing the intelligence and prudence with which their property has been managed, they also indicate the rapid growth of a business which is attaining gigantic proportions in this country, and the development of questions which are assuming a national importance, and taxing the wisest foresight of statesmen and philosophers.

The earnings of the Pennsylvania railroad and branches, for 1872, were upward of twenty-two millions ($22,000,000), a little over four millions of which were derived from passengers, and nearly seventeen millions from "general freights." The total expenses were over thirteen millions, leaving the "net earnings" in 1872 more than *eight millions*. The whole number of passengers carried on this road for the year was 5,250,393, and the average distance travelled by each was a trifle over 33 miles.

From the statements of charges and costs we learn that the excess for each passenger is six and two-tenths mills per mile, and on each ton of freight five and three-tenths mills per mile. Of all the railroad

lines leased and directed by this company, it appears that none yield a profit, but that, on the whole, there is a deficit of more than two hundred and twenty-four thousand dollars. These include the united railroads of New Jersey, the Belvidere Delaware Railroad, and Flemington Branch, and the Delaware and Raritan Canal. The Philadelphia and Erie Railroad being found particularly unprofitable the Pennsylvania Company has agreed to work it at cost, giving to the shareholders whatever profit the enterprise may develop. Thus, it will be seen that the natural jealousy with which the increasing extent and influence of such corporations are regarded is in this case unfounded, at least as far as relates to the minor companies, which receive larger incomes under a lease than when independent.

The advantage thus far has accrued to the public in the increased facilities for handling freights thus afforded, and the decrease of time between distant points. The Pennsylvania Railroad has paid its stockholders the respectable dividend of 10 per cent. during the year, having a surplus net profit sufficient, as Mr. Thompson estimates, to have paid the same dividend upon an additional capital stock of nearly twenty-four millions. But, as he remarks, "it is the duty as well as the interest of the company to meet the legitimate demands of the public for increased transportation facilities." Hence, he recommends that twenty-two millions be expended in 1873 for improved terminal facilities, additional tracks, wharves, depots, etc. The Pennsylvania Railroad has also a controlling interest in over twenty-two thousand acres of anthracite coal lands, and assets, consisting of stocks and bonds of other companies, amounting, at their present cash value, to more than fifty millions, in addition to a controlling interest in the American Steamship Company. These facts will serve to give an idea of the amount of business transacted by the greatest of American corporations, and the comprehensive policy pursued by its directors.

Although there exists a well grounded fear of the power of such corporations to prevent competition and absorb the profits of the western farmer in bringing his products to the sea-board, yet we notice a step taken by this company which promises relief to the cheap transportation difficulty. This is the construction of the "low grade line" for freight only, at cheap rates of transportation and slow speed. Says the President, in his report, "When completed, and its connection perfected with the West, freights may be carried between the West and the sea-board at much cheaper rates than they can by any of the proposed canals between the Mississippi valley and the East." This suggests a plan which seems to us of value at this time when projects of new canals are daily spread before the people as solutions of the transportation problem which is agitating the entire country. It is, that instead of the government's expending any more money in building

canals which cannot compete with the railroads for half the year, one, two, or twenty lines of railroads, as may be necessary, be built by the general government, or the states, to be operated solety at cost, and thus save the immense profits of the railroad companies to the producer of the West and the consumer of the East. But this is a question which is likely to tax the utmost resources of our statesmen and become a national issue during the next quarter of a century.

In concluding our notice of this Report, we can only say that it is to be hoped that some of the sagacity, prudence, and consideration for public interest which characterize the managers of this road might be "transported" into our own state, and supersede the present grasping and extortionate policy of some of our leading railroads.

Although numerous reports of similar corporations reach our table from time to time, we seldom take them up for the purpose of examination, but we confess that we are led to do so in the case of that of the Lehigh Valley Railroad by noticing among those of the directors the name of William H. Gatzmer, who, we are informed, is further connected with that company in the important relation of consulting manager. We feel assured from Mr. Gatzmer's long experience and distinguished success in railroad management that the direction of this road cannot fail to be more just and liberal even than in the past, under the influence of his integrity and enterprise. We expect to see the result of this accession both in prosperity of the company and benefit to the public. Thus led to examine this pamphlet we find in it not a little of general interest.

The Report of the company is summed up in the first sentence, "The business of the past year has been without any great fluctuations, and has shown a satisfactory increase." As is well known, this road is mainly employed in the great coal industry of eastern Pennsylvania. The anthracite coal tonnage for the past year was 3,850,118 tons, being an excess of 1,168,609 tons over that of 1871. The receipts show the very large net income of 2,565,228 dollars; but a large portion of it was derived from coal lands owned by this company. The following paragraph from the engineer's report in regard to coal production refers to a feature of the business not altogether creditable, and which we agree with him in hoping will not again appear: "Should there be a corresponding increase for a year or two more, the total consumption will be so nearly equal to the full capacity of the mines for production as to render unnecessary all *attempts to regulate or control the trade.*" The following extract also possesses an interest for all: "The low price at which anthracite coal has been sold and transported during the past year has induced an increase in its consumption, in consequence of which the production has exceeded that of any previous year."

Notwithstanding the immense amounts of coal and iron ore which

are annually taken from beneath our soil, yet the unmeasured mass of mineral wealth stored up in past geologic ages as the inheritance of this "peculiar people" remains comparatively undiminished. The coal deposit of England, great as it is, has been measured, and the time determined when it must fail. Already her vast manufacturing interests are beginning to seek our shores in consequence of a rise in those necessaries. Coal and iron are the substrata of modern civilization, and whatever relates to their production, transportation, and distribution, affects, directly or idirectly, every interest of the nation. The Lehigh Valley Company, we notice, is also extending its facilities by the costruction of a new line to the sea-board at Perth Amboy. These undertakings are encouraged by the public, as rendering more and more difficult all attempts at controlling the transportation and price of this great staple. The whole tenor of this Report indicate a state of healthy and conservative progress.

The Atlantic to the Pacific: What to See, and How to See It. By JOHN ERASTUS LESTER, author of "The Yo-Semite: Its History, its Scenery, its Development." 12mo, pp. 360. Boston: Shepard & Gill. 1873.

BOOKS of travel, especially those giving descriptions of noted places and scenery, are among the most frequent emanations of the press. Every one who has seen the Alps, and can wield a tolerable pen, feels called upon to give the world another description of those mountains, and to publish his impressions of the vale of Chamouni. Now that it has become possible to see greater mountains and a more beautiful valley by a trip across the continent, descriptions of the wonderful Yo-Semite and surrounding scenery are almost daily laid before the public. The new interest attached to the Yo-Semite Falls, the geysers and the huge trees, have made descriptions of them all readable, but not every one who has seen them has known "what to see, and how to see it" and, still less, how to describe it. Mr. Lester possesses all these qualifications of the traveller and writer, and the result is a very readable book, full of interesting information.

SCIENCE AND ART.

The Ocean, Atmosphere, and Life. Being the Second Series of a Descriptive History of the Life of the Globe. By ÉLISÉE RECLUS, author of "The Earth," etc., etc. 8vo, pp. 534. New York: Harper & Brothers. 1873.

IN the present volume the learned and instructive author of "The Earth," which has attracted so much attention in all parts of the

world, continues his history of the life of the globe, considering successively the ocean and atmosphere, vegetable and animal life in the earth and ocean, and their mutual influence. In treating of the ocean he considers in order the seas, currents, tides, shores and islands, and the *dunes*. In the portion on the atmosphere are treated the air and winds, hurricanes and whirlwinds, clouds and rains, thunder storms, auroras, magnetic currents and climates.

Under the head of life, are discussed the earth and its flora, the land and its fauna, earth and man and the work of man. These will indicate the comprehensiveness of the work and the amount and kind of information which may be derived from its perusal. The day has arrived when "many shall run to and fro and knowledge shall be increased." This is certainly true of the votaries of physical science, who are daily piercing to the remotest corners of the globe, and bringing fresh additions to the fund of human knowledge. Since the impulse given to physical research by Humboldt, the species of "closet naturalists" has become extinct. A Whymper scrambles to the topmost peak of the Alps, while a Tyndal laboriously follows the course of the glaciers. An Agassiz sails to distant waters to drag up the secrets of the deep, and a Hall sacrifices his life in attempting to penetrate to the frozen pole.

These are but examples of that enthusiastic research, which results in such additions to our knowledge as the volume before us. It is not written to establish any theory or overthrow any hypothesis, but to present all the facts and results of observations thus far accumulated in respect to our planet. These are not confined to any one science. Thus we have geology in the discussion of the bed of the sea and its changes, the washing away and extension of shore lines, and upheaval and sinking of islands; astronomy in the tides and great movements of the sea; meteorology, the science of electricity; botany, zoölogy, and history. Yet, with this array of sciences, there is not a page which is not possessed of general interest. Facts and observations are collected from every source and quarter of the globe by the indefatigable author, and presented with the precision and moderation of statement which characterize the modern scientist, yet in an easy style and with an abundance of illustration which will attract all classes of readers. We notice occasionally a *lapsus pennæ*, as on page 63, the velocity of a wave at sea is given as 2,100 feet per second, where it evidently should be 21 feet per second, or about 15¼ miles per hour.

The average height of waves on the North Atlantic has been found to be about 30 feet, but the height to which the accumulated mass of waters known as breakers attain, when the configuration of the coast favors the movement, partakes of the marvellous. The Bell Rock lighthouse, off the Scottish coast, 112 feet in height, is often enveloped in waves and foam, even long after the tempest has

ceased to disturb the sea. Waves have been seen, too, covering the Eddystone lighthouse, and leaping in a spout of water 82 *feet above the lantern!* The pressure exerted by these masses of water is no less surprising. Waves have been seen to seize blocks of stone weighing several tons, and hurl them like playthings over the dykes. At Plymouth a vessel weighing 200 tons was thrown, without being broken, to the very top of the dyke, where it remained erect as on a shelf beyond the fury of the waves. What wonder that the waves are continually changing the outlines of the land, demolishing cliffs here and forming islands there! Of one of the effects of ocean currents M. Reclus thus writes:

"If Columbus had not made use of the semicircular current which flows from the coast of Spain to the Antilles he certainly would not have discovered America. If the pilot Alamius and, since his first voyage, the greater part of the navigators returning from the Antilles and United States, had not followed the course of the Gulf Stream the coasts of America would have remained practically far more distant from Europe than they really are. The colonies, now become so prosperous as independent republics, would be still in deplorable isolation; and civilization would have been greatly retarded, or even completely arrested, for want of new impetus."

Interesting and instructive as is the author's treatment of the ocean and atmosphere, that of vegetable and animal life is more so, particularly that portion which treats of the earth and man. "We are of the dust," says our author, "whether we may have sprung from the slime of the Nile, from the red earth of the Euphrates or the sacred alluvium of the Ganges." He does not conclude that all have come from one ancestor, but draws the more startling conclusion that all are rapidly merging into one race here in the new world, or "if it is a fact that fusions between different races can produce nothing more than sterile hybrids, the case is plain; mankind is condemned to death." The influence of nature on the destiny of mankind, the harmony existing between countries and the nations inhabiting them, and the reaction of man on nature, are eloquently discussed. Of the latter he says: "Numbers of the works of man have been attended with the fatal result of impoverishing the soil and disfiguring the face of nature. Taken as a whole, mankind has not yet emerged from his primitive barbarism." If this be true, we yet trust that those who read and heed this work of M. Reclus' will take one step from that sad condition.

A Review of "Prof. Reese's Review" of the Wharton Trial, with a brief notice of the Schoeppe Trial. By Prof. WILLIAM E. A. AIKEN, M.D., LL.D., Professor of Chemistry, etc, in the University of Maryland. Pamphlet, pp. 20. New York: D. Appleton & Co. 1873.

PROF. AIKEN, in consequence of the conscientious discharge of his duty to the state, as a witness for the prosecution in the Wharton trial, is obliged to appeal to the public in self-defence. Sufficient time has not elapsed since that memorable trial for the incidents to be entirely forgotten. It will be remembered that Prof. Aiken, an eminent analytical chemist, was called upon to make an examination of the contents of the stomach of Gen. Ketchum. With the question of the guilt or innocence of the accused he had, directly, nothing to do. But as the results of his careful investigations and report thereof had a most important bearing upon that question, his testimony was the signal for a most disgraceful attack upon that gentleman by the opposing counsel. Not only are his professional knowledge and reputation assailed, and every effort made to destroy them, but even his personal and private character is defamed. And not only is this done to the discredit of the counsel, but to the discredit of a court which permits it, and the press which sustains it. As the result, the accused, whether guilty or not, goes forth acquitted by a court of law, but the innocent witness has suffered an injury which years may not repair. The professional reputation upon which he depends, perhaps for a livelihood, is injured, and he has no court of appeal or redress.

We mention these facts, not to take the part of Prof. Aiken, with whom we have not the least acquaintance, but to invite attention to this defect, to call it by no harsher name, in our jurisprudence. Medical jurisprudence is one of the most efficient auxiliaries of law; but if scientific witnesses are to receive no protection from the courts, what is to become of its administration? These are questions of public interest and affect the common welfare. As for Prof. Aiken, he has in this pamphlet effectually answered all objections as to the value of his experiments. These we leave for the scientists to discuss among themselves, but we hope it may not soon again be necessary for scientific witnesses to diverge thus from their professional duties in defence of their character and reputation. In the following truthful terms, Prof. Aiken states the position of scientific witnesses:

"If, after due consideration, he boldly expresses his opinion at an inquest, and persists in it, he is said to be prejudiced; if he hesitates, or expresses himself timidly, he is not to be trusted. There is but little protection afforded to a witness by a court of law; the accused person is there the sole object of sympathy and consideration, and a learned counsel is only mildly rebuked who, against the whole bearing of the scientific evidence, asserts that the prisoner is innocent and asks the

jury to adopt his venal assertion in preference to the unbiased opinions of medical men."

Still more strongly does he state the experience which may be expected by such witnesses in speaking of the Schoeppe case:

"The analytical chemist, when called upon to aid in the administration of public justice, has a public duty to perform, no matter how distasteful it may prove. He must be prepared to encounter all kinds of abuse, and to find all the worst feelings of human nature arrayed against him. Personal animosity, professional jealousy, the antagonism of rival institutions, national feeling, sectarian prejudice, and maudlin sympathy will leave nothing undone to destroy his evidence or to destroy his character. One man will object to his length of years, another to his length of beard."

Certainly these facts do not go to prove that medical jurisprudence in this country has attained a high degree of perfection. When scientific men of high reputation and unimpeachable private character are subject to such indignities and attempts to ruin both, for the simple performance of a trust committed to them, it is time that a different spirit prevail in the community. The analytical chemist may experiment in his laboratory upon all the acids, alkalis, and metals in existence without creating a ripple of public disapproval. But when in the same manner he is called upon to determine as to the presence of antimony in a dead man's stomach, great fears are aroused lest somebody may be convicted of murder, and, accordingly, the humble chemist is sought to be sacrificed.

Professor Aiken discusses ably his experiments upon the stomach of Gen. Ketchum, and shows clearly the defects in those of Prof. McCullough, "repeated and verified by Dr. Gurth and Profs. Reese and White." On the whole, his pamphlet will be found an instructive chapter upon a certain phase of our social condition.

Inductive Inquiries in Physiology, Ethics, and Ethnology. Relating to subjects of Recent Research or Speculation. By A. H. DANA. 12mo, pp. 308. New York: A. S. Barnes & Co. 1873.

IN this commercial age, and amidst the all-absorbing pursuit of wealth which especially characterizes life on this continent, it is rare to find men belonging to the active professions who have the taste and leisure for inquiries of the kind which compose this volume of Mr. Dana's. While these subjects have an interest for the scholar, the latest developments in science are represented and living issues discussed. It contains fifteen essays or "inquiries," some of which have attracted attention in the pages of this Review. The prominent subjects are "Evolution—Natural Selection," "Philosophy of Population," "Conservation of Forces," etc.

It will be seen that they embrace quite a variety of topics, some of them possessing general and vital interest. The manner of treatment is neither didactic nor argumentive. The latest facts are skilfully collated, and in some instances, as "Evolution—Natural Selection," so arranged as to lead to conclusions in opposition to those of the chief advocates of popular theories. The author's style is lucid and attractive, even to the unscientific reader, and his manner of presentation philosophic and impartial. His aim is thus indicated in the preface:

"I have sought to collate, in a compendious form, the most interesting facts involved in scientific inquiry, and especially such as are of recent development, and have the most direct bearing upon the physical uses of life and moral culture."

This aim has been, on the whole, well sustained, and in some instances even a further step is apparent, leading toward the conviction of a divine power in the universe superior to all dynamic agencies and laws of development. Some of the essays, as those on "Popular Illusions," "Reputation among Men," and "Inventions and Discoveries," are mainly statements of interesting historical facts, with only sufficient theory advanced to serve as a connecting chain, with no attempt at discovering fundamental causes or sustaining an hypothesis. Others, as "Waste in the Material Creation," "Psychodunamy," and "Etherical Development," present the facts and arguments on both sides, without arriving at definite conclusions, which, indeed, have not yet been reached by the scientific world. In others, which we have noted, the author advances his own opinion, but so well sustained by facts and arguments as to justify, at least, his opposing such magnates in philosophy and science as Spencer and Darwin. Thus, speaking of the Evolution theory of Herbert Spencer, he says:

"Thus far has been substituted only a process or consecutive order in place of a direct creative act. We are next to inquire whence comes that process or order. If there is a law, was it not instituted by some law maker? We have, then, interposed between existence and the creative will merely a gradation instead of a single act. The causation is by a consecutive method instead of a direct fiat. Nothing has been gained by the skepticism which underlies all evasive explanation; nothing at all events than removing a little further from our immediate observation the originating cause" (pp. 187, 188).

This is the voice of calm and conscientious philosophy. Indeed, in all these essays the impartial spirit of true inquiry is evident. The number of useful facts collected from a wide diversity of sources, and aptly introduced, render this work of Mr. Dana's a valuable compendium of scientific and general information.

Illustrated Catalogue of Grand, Upright, and Square Piano-fortes. Manufactured by Decker Brothers. New York. 8vo, pp. 63.

THERE are few subjects which we have discussed in this journal oftener than music. Nor is this a mere matter of personal taste, or fancy on our part, although none are more strongly impressed by the melodious art. But we do not regard the educational agency of music as confined to those who employ professors to instruct them in it, and those who study it themselves without the aid of teachers. We fully accept the maxim of Pythagoras that none can listen habitually to good music without being more or less refined by its charms.

Accordingly we have always considered whatever is calculated to extend its sphere as a public benefit. That improvements in the piano have this tendency more than any other means none who have bestowed any thought on the subject will deny, for they need only bear in mind that it is the great home instrument of the present day—that with which is associated more than with any other the fond remembrances of mother, sister, sweetheart, wife. And nowhere, we are glad to add, has it attained this noble distinction in so high a degree as in this country, for in no other country of equal population does the piano find its way into so many households. True we cannot claim yet that our people owe this advantage to their superior taste for music; they owe it chiefly to the fact that happily there is no other country in the world in which the luxuries of life are so much within the reach of intelligent industry and enterprise. But it is precisely for this reason that we have regarded every improvement in the piano as an additional inducement to urge a more general appreciation of its importance and value, not merely as an instrument of music, but in fact as an instrument of civilization. None have stronger faith than we in the intelligence of our people, but there has never existed a people a large proportion of whom were not unacquainted with many things a knowledge of which would have contributed much to their happiness, and, as the author of *Záire* has it, one cannot desire to have what he does not know.

"On ne peut desirer ce qu' on ne connait pas."

The Steinway pianos have always been our favorite instruments, and we see no reason to believe that our sentiment in that respect will ever be materially altered. But if Mozart is our favorite among composers, is that any reason why we should not also admire Handel, Beethoven, Hadyn, Rossini, and Meyerbeer? Is it any reflection on the genius of Mendelssohn to admire that of Chapin, Liszt, and Thalberg? As well might it be said that because the perfume of the rose is more agreeable to us than that of any other flower we should despise the lily, the tulip, and all their fragrant and beautiful sisters?

We do not, therefore, admire the real excellences and genuine

merits of the Decker instruments anything the less because we have a preference for the Steinway instruments, but it is the former which engage our chief attention in the present article ; the Illustrated Catalogue before us having recalled to our memory many a charming strain enjoyed in public and private—strains fully justifying the enthusiastic exclamation of the poet—

"O Music ! sphere-descended maid,
Friend of pleasure, wisdom's aid ! "

For next to the Steinway, it is the Decker instrument we have oftenest heard, and from which we have derived most pleasure during the past two or three years. We have opened the Catalogue, therefore, with a lively faith, and we find the style in which it is gotten up calculated to prepossess us still more in favor of the agreeable things whose peculiar merits it sets forth. Very appropriately it commences with a pretty song composed expressly for it ; and it is adorned with two other original pieces of considerable merit, by different composers.

The "opinions of the press," usual in such publications, occupy their full share of space in this, and we see no reason to doubt that they are honestly given. We readily admit that the praise they bestow is well merited, but in many instances it is on far too high a key. The essential facts are so overloaded with eulogistic epithets that by the cultivated, sober reader, they are liable to be mistaken for burlesque, which is the worst kind of satire. Viewing the matter in this light, we could not help thinking more than once that if the manufacturers of these fine instruments are at all prone to offer up prayers, they might justly exclaim "Save us from our friends !" especially as it is the pious editors who indulge most in this piling on of superlatives. There are some who, it seems, cannot point out the simplest facts without dressing them up in such a fantastic way as to excite suspicion of their genuineness. Thus, for example, an artisan who served his time in one of the best piano manufactories in Europe arrives in New York, visits the Messrs. Decker's factory, and is astonished at the improvements he finds. This we know to be true, and it is creditable both to the skill and taste of our New York manufacturers and to the enlightened candor of their European visitor. But let us see how that incident, sufficiently interesting in itself, looks when subjected to the treatment of a "religious" paper. The following extract we take, however, not from the Catalogue before us, but from a long article in a weekly journal which claims to have no superior anywhere in piety, taste, or ability—

"An illustration of the relative condition of the manufactories abroad and at home was brought to our notice a short time since. An experienced and highly intelligent artisan, who had been employed for a number of years in some of the best ordered piano factories in Germany, arrived in New York last month, and soon after visited the establishment of the Decker Brothers, on West Thirty-fourth and Thirty-fifth streets—a model of systematized detail, by the way—through which he

was shown. At first, his escort took but little pains to point out the features of the various departments, but the numerous questions and the puzzled look of the stranger soon disclosed the fact that he did not comprehend the uses of one-half the machines and implements that met his astonished gaze. The operation of what is termed a double round rim-press, which the Deckers invented to simply expedite and perfect the process of veneering, amazed him beyond expression, producing upon him much *the same effect* that a peal from the Boston organ might be expected to have *upon Captain Jack of the Modoc braves.* The celerity with which the contrivance performed its functions was what chiefly baffled his belief. He saw the work of veneering better done in *five minutes* than it could be accomplished by the old method in half an hour. The whole process of manufacture was as novel to him as *if he had been a Sandwich Islander* instead of a Hamburger, and he found that, before going to work in his specialty in New York, it would be necessary for him to serve an apprenticeship, in *order to forget the little* which his European schooling had taught him of the art of piano making."

Now, we ask our readers, is there not an air of burlesque about this, although, as we have already remarked, the main facts are strictly true. That is, it is true that the Deckers have made important improvements in the manufacture of pianos; and it is true that their instruments are now worthy of comparison in capacity, tone, "touch," and elegance of finish with those of the Steinways, and consequently with those of the best European manufacturers. But there is neither truth nor common sense, nor any other sense than that of vulgarity, in the fine similes in which "Captain Jack of the Modoc braves," and "a Sandwich Islander," are made to represent European piano manufacturers as compared to our New York manufacturers.

The organ is a much more ancient instrument than the piano; for we have no evidence of the existence of the latter at an earlier period than 160 years ago, or at most 200 years. Up to that time the nearest approach to it was the harpsichord, an instrument differing little from the harp except in being horizontal, though it was like no such harp as the beautiful and noble instrument manufactured at the present day in London and New York by the Messrs. Browne & Buckwell, and which ought to have a prominent place in every seminary, academy and school in which music is taught to either sex. The harp is a still more ancient instrument than the organ, for the former was used in the palaces of the Pharaohs, as well as in the camps of both Greeks and Trojans of the Homeric times. This we will take occasion to show at a future time, for to us the subject is a most attractive one; but we can only remark now in passing that of all instruments the harp is the most classic, and that most associated among the most cultivated races with poetry and song. In short, the harp occupied a position among the Assyrians and Egyptians, as well as the Greeks, similar to that which the piano and the organ occupy at the present day in all enlightened countries.

Of the antiquity of the organ it is sufficient to say that it is at least as old as the Christian era. So early as the middle of the seventh

century it was used in the churches in all the principal cities of Europe, and we read that Constantine Copronymus, the Greek emperor, presented one to King Pepin in 755.

It is a matter of some doubt and controversy who were the first successful manufacturers of the organ in the United States. But it is, we believe, generally acknowledged that among those that have been most prominent in introducing it and perfecting improvements in it are the firm of George Woods & Co., of Cambridgeport, Mass. Mr. Woods, who is remarkably ingenious and possesses mechanical skill of a high order, has devoted the greater part of his life to developing the resources of the instrument, and having been fortunate enough to have associated with him the possessor of a considerable fortune, he has succeeded in building up an establishment which produces a larger number of in-instruments annually than any other house in this country—instruments which, like the Steinway pianos, have a European fame, and are also in more or less demand in all the South American states, including Brazil. Those well competent to judge inform us that the most attractive and characteristic feature of the Woods instrument is the "combination solo stop." This, it is claimed, imparts to their instrument a wonderful capacity for blending the piano stop with some of the more delicate reed stops, while facilitating several other beautiful combinations and variations. Let the secret of the matter be what it may, it is certain that the Woods organ has a tone of remarkable sweetness, and a richness and tenderness of melody possessed by few if any other parlor organs. We shall never forget how much delighted we were one spring morning, some three years ago, when a Boston lady, distinguished alike for her musical and literary talents, sang some verses, in the original, from Frieligrath's beautiful lyric *Der Blumen Rache* (the Revenge of the Flowers), accompanying herself on a Woods organ. The whole performance made such an impression on us that we cannot forbear transcribing here the lines in the rendering of which both the instrument and the voice of the fair and gifted performer appeared to best advantage, and most charming:

"Mädchen, Mädchen! von der Erde,
Hast du grausam uns gluss-n,
Dass wir in der bunten Scherbe
Schmacten, welken, sterten mussen!"*

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* Maiden, maiden! thou hast torn us
From the earth, that, 'neath thine eye,
In yon gaily painted chalice,
We may languish, fade and die!

APPENDIX—INSURANCE: GOOD, BAD AND INDIFFERENT.

1. *Proceedings in the Great Insurance Libel Case.* 2. *Reports of Legislative Committee.* 3. *Chamber of Life Insurance.*

In the palmiest days of Life Insurance there was but little done at midsummer, and the present season forms no exception to the rule, if it be not, indeed, the dullest we have had for a dozen years. Still, at no time during this period had we more faith in the future of life insurance than we have at this moment. We cannot wonder if, judging by the experience of the past year or two, many regard this as paradoxical. But a little reflection will fully sustain us in our view of the case. Be it remembered that no worse catastrophes have occurred than we had predicted many a time as inevitable. To us there is nothing strange or unaccountable, therefore, in the fact that during the last three years not fewer than twenty-six life companies, each of which had been lauded to the skies as "beneficent," "solid," "established on a firm basis," etc., have ceased to exist. Their having continued to exist would have been the strange, unaccountable thing; a sad commentary on the intelligence and perception of our people. Such a result would also have seemed to show that our criticisms were unjust, and that we deserved to be ranked among the false prophets, since there is not a single one of any prominence of all the companies that have passed out of existence against which we had not, again and again, warned the public, as having never been otherwise than in a moribund condition.

Our wonder is, then, not that so many have died, but that so many of the same class, whose false pretensions we have also denounced many a time, and whose untimely death we have declared certain, still manage to eke out a nominal existence. Those of our old readers who still honor us with their attention to our views need not be informed that there is not one of the extinct companies in defence of whose "integrity," "beneficence," "stability," etc., we have not been more or less abused by the bullies of the insurance press. It is but fair to admit, however, that lately we have been allowed considerable immunity in this respect. For every dozen loads of garbage flung at us some years ago there is scarcely half a load now. Not but the bullies are as ready and willing as ever to do their dirty work, but their employers have learned that in our case that sort of tactics does not pay. Independently of this fact there are few so stupid as not to have discovered by this time that companies elaborately "defended" by those insurance journalists who claim to be at the head of their craft, are to be looked upon with suspicion on that very account. Nay, whenever a eulogy of unusual length and fervor is seen now in one of those pamphlets, the most casual observers begin to ask each other, what is wrong?

This has become so notorious of late that even those having the strongest stomach for praise have become somewhat shy of it. This is true even of the managers of the Mutual Life, for whatever may be the weaknesses of Mr. Winston and one or two of his colleagues, in regard to the difference between *meum* and *tuum*, they are shrewd enough to understand that even their favorite "whitewashing" contrivance may be so overdone as to do them more harm than good. True, this seems somewhat inconsistent with one or two of their recent performances, to which we will presently give some attention. The uninitiated would scarcely believe that the chief cause of that unfortunate libel suit was the altered sentiment on the part of the distinguished plaintiff as to the value in hard cash of the "first-rate notices" and "complete vindications" of insurance editors. Yet we know no theory of the unhappy "difficulty" between the Mutual laird and his "oft and well-tried" henchman that rests on so strong a basis. Thus, for example, if we are to believe the most reliable accounts that have reached us, there was a time—quite a long period—when an attack of even ordinary ferocity on us, in defence of the superior plans of the Mutual Life, and in vindication of the spotless integrity and fathomless skill of its chief manager, brought the individual who made it a hundred dollars and upwards, according to the number of strong epithets which it contained. We are assured that in some instances the great insurance Mokanna paid $500 apiece ($10 a line) for performances of this kind. Now, when it is known that other fault-finders have been favored like ourselves in this way, it will not be difficult to understand that it was a very provoking thing on the part of Mr. Winston to say to his worthy henchman: "Well, 'tis no use. You must see yourself that if your onslaughts have any effect whatever on the National Quarterly, it is only to stimulate it to ridicule us more and more." Henchman—"I don't see anything of the kind. You never laid out $500 better in your life. Suppose we cannot frighten the Quarterly; can't we make people believe that it is only slandering you out of spite and malice?" "But see what the newspapers throughout the country say of its criticisms on us. If so many companies had not failed as the Quarterly predicted they would, while not one of the companies in which it has expressed its faith has either failed or suffered much in its reputation—then you might be able to do us some good in this way. As it is we must try some other plan."

Very soon after this it was discovered that more than we had ever said, and been abused so much for saying, of the Mutual and its chief manager was strictly true. Of course the latter was brimful of indignation. His other organs, delighted at the turn things had taken, published homilies in all their issues on the "base ingratitude" of their confrère. There was nobody like Winston—such an epitome of all the Christian virtues—so perfect a model of an underwriter; so gen-

erous and noble a protector of the widow and the orphan! And how vile must be the person—can he be anything better than a demon?—who would turn on such a man—nay such a benefactor of mankind! True, in all this there was nothing new—not as much as a word. All had been said and resaid in every mood and tense by the same individual, now become the "Judas Iscariot" of insurance editors.

No wonder that the head of poor Winston, never a very strong *caput*, except in cogitating on long purses filled by widows and orphans against their will, was turned at this juncture. Nothing less imposing than a libel suit on a large scale would assuage his wrath. Our readers may remember that, with our usual benevolence, we warned him against the libel plan, telling him that of all his whitewashing performances it would prove the most useless, or rather the most mischievous and deplorable in its results. But no use. When the ire of doughty men is once kindled it cannot be extinguished until it does mischief to one side or the other. In the case under consideration it has had this effect on each side, but it is certain that the wounds it has inflicted on its own side will prove the most difficult to heal.

Before we proceed to show those who may not be aware of all the facts how this has happened, we think it proper to remark that now, as on former occasions, we make a distinction between the Mutual Life and those numerous companies whose early demise we have predicted from time to time. We have never represented that company as insolvent, or in a moribund condition. We have only represented it as badly and not very honestly managed. Instead of comparing it with the dead or dying companies, we have always compared it with the best, although only by way of contrast. It is scarcely necessary for us to mention here the companies with which we have been contrasting the Mutual Life for twelve years past. Surely our readers must know them by this time, for their characters remain unchanged. What we said of them, three, five, seven or eleven years ago, is confessedly as true of them to-day as it was then. If there is any difference it is one in their favor; time has developed more and more the good qualities and characteristics for which we gave them credit at the outset.

But may we not say, upon the other hand, that time has also developed the bad qualities which we attributed to the Mutual Life a dozen years ago, and often since? In other words, can it be denied that the contrast alluded to has been growing wider and wider to this day?

We have remarked, however, that we have not been in the habit of numbering the Mutual Life among the dead or insolvent. But what does constant bad management tend to? If it be true, as the poet tells us, that the paths of glory lead but to the grave, still more true is it that the paths of false glory, the paths of avarice and greed, the paths of vulgar clap-trap and spurious kalsomining lead but to that goal. It follows, then, that such is the tendency of the Mutual Life at this

moment, and the fact will be the more easily understood, and the more readily admitted if it be borne in mind that the peculiarly favorable circumstances under which that company was built up and enriched no longer exist. We have shown more than once in these pages that while there was little or no active competition, and while the public had but a vague knowledge of life insurance, but almost unbounded faith in fair speeches and fine promises in regard to its wonderful virtues, the Mutual did a flourishing business. We have also shown that as soon as these advantages ceased to exist—as soon as the public became familiar with the characters of companies like the Manhattan Life, the New England Mutual, the Equitable, the Phœnix Mutual, the Mutual Benefit, etc., etc.—learning, at the same time, how much more magnificent are the promises and pretensions of the Mutual than its performances, that company commenced at once, while making the most desperate efforts to conceal the fact, to exhibit to the careful observer those marks of decay which are now visible to the most short-sighted.

On some occasions we have taken the liberty of offering friendly advice to the Mutual Life, as well as to other companies, although we thought it more likely to be rejected than accepted. As already remarked, we have done so in regard to the great libel case, telling Mr. Winston that he could hardly engage in a more foolish enterprise. When we ventured to predict that no good would result from it, either to the Mutual Life or its manager, no petition had been sent to the legislature by the incarcerated alleged libeller—no investigation had been ordered by that body. At this stage of the great libel case we wrote for our March number as follows:

"But there is another view of such cases as the particular one referred to. Who will say that Mr. Winston has done himself, or the Mutual Life, any good by his eight libel suits against his former retainer and champion? Does any one think the more highly of president, or company, on account of them? *Is it likely that any one will, when all are brought to an issue, if they ever are?* Supposing that a verdict were obtained to-morrow in favor of the Mutual Life and its president—*a contingency not in the least probable*—would it not be *dearly bought?* Would it not prove the most useless of all the 'whitewashing processes' ever attempted by Mr. Winston? *for the American people have far too much generosity not to frown grimly on those who, having a giant's strength (especially in the form of wealth), use it like a giant in oppressing the weak!*"

Has this been verified since, or has it not? Time has proved the correctness of our views in this case pretty nearly as fully as it has in the cases of the numerous companies whose death we had confidently predicted, often years before it occurred, and without any pretensions to the miraculous, or to any more "occult science" than mathematics and logic, as we practise them at our private desk, without the aid of spy or "own correspondent." But what is the proof that we were right when we penned the above passage? Let the majority Report of the Committee on Grievances appointed by the legislature answer the question.

Omitting the introductory paragraphs, partly for lack of space and partly because they contain nothing which is not already known to the public, we subjoin the remainder of the report:

"The evidence shows that the petitioner, Stephen English, was arrested upon an order granted by Judge Barrett of the Supreme Court, on the 13th day of January last, and bail fixed at the sum of $20,000; that on the same day another order of arrest was granted by Judge Barbour of the Superior Court, upon which bail was fixed at the sum of $20,000; that said English being unable to procure the required bail was soon after arrested, and has ever since been confined in Ludlow street Jail, in the city of New York. The alleged libels upon Frederick S. Winston, the President of the Mutual Life, are fully set forth in the complaint and answer, and your Committee have necessarily been compelled to inquire into all of them in order to determine their weight and thereby to measure the justice or injustice of the incarceration of the petitioner, English. They find that most of the material allegations of English against the character and actions of Winston are not new or original, but that they have been heretofore charged, and been made the subject of investigation, sometimes by trustees or others connected with the company, other times by policy-holders, and especially by one who for four years appears to have been the most active, outspoken and resolute opponent of the officers of the company.

"With the exception of the investigation made by the late superintendent, George W. Miller, when the policy-holder above alluded to appears to have been present during the greater part of the investigation in the attitude of a prosecutor, these investigations have been *ex parte*, and appear to your Committee, *from the evidence, to have been conducted more for the purpose of palliating and defending*, than correctly ascertaining and declaring the *true character* of those actions for which the officers had been arraigned.

"Your Committee do not deem it necessary to go into all the charges in detail, but to report only and briefly on those deemed most material which are contained in the petition of Stephen English, and which constitute the chief element of the libel, *if any has been committed*, upon President Winston, and to submit for your consideration the conclusions at which the Committee have arrived.

"The charge, that surrendered and forfeited policies on the life of President Winston's son had been revived *after his death, was proven to be true.* All the policies alluded to had been surrendered and paid for, or forfeited for non-payment of premiums, nearly two years before his death, and *were revived after death to the extent of twelve thousand dollars.* The deceased son appears to have been an efficient and popular young officer, and worthy to have been properly considered; but the restoration of the policies in the manner and under the circumstances which it was done was, in the opinion of your Committee, *a wrong upon the other policy-holders* of the company which the officers and trustees *should not have committed*, and for which *they may be justly censured.*

"The illegal purchase, at a higher rate than its surrender value, of a policy upon the life of a trustee; its subsequent restoration when he was actually moribund and its payment as a death claim, was proven. The transaction appears to have been without the knowledge or sanction of the insurance committee or the board of trustees, and the whole responsibility appears to rest upon President Winston, and the evidence afforded to your Committee no ground upon which *such a palpable violation of official duty can be justified.* The manner and apparent object of the purchase of some other policies was such as your Committee *could not approve*, but as they are of minor importance they need not be more fully noticed.

"The distribution of a bonus of over $189,000 among the officers of the company, in addition to their ample salaries, and *its concealment from the policy*—

holders by charging far the greater portion of it to '*dividend account*,' *was proven to be true.* Whilst your Committee fully approve the giving of liberal compensation for services of faithful officers, they hold that such compensation should be so given that it may be received as a reward, without operating *as corruption*, and that in this view the 'bonus' distribution and its concealment from the policy-holders *are deserving of serious condemnation.*

"Some loans and advances were made by President Winston in an unauthorized and irregular manner, but no loss appears to have been thereby incurred by the policy-holders, and but for their irregularity and the *misrepresentation* by which it was attempted to conceal them, naturally begetting suspicion of wrong intent, these loans would probably never have been made the subject of adverse criticism and censure.

"The use made by President Winston unofficially of over $18,000 in payment of drafts of agents of this state in 1864, has been severely criticised and as warmly defended on the score of its necessity and patriotic motive, but in the opinion of your Committee, the facts and attending circumstances *disprove its necessity and invalidate the plea of patriotism*, and show it to have been an *undoubted violation of the charter, and an unwarrantable use of trust funds by President Winston to serve his personal friends.*

"Considerable sums of money are shown to have been expended and charged as taxes, office rent, counsel fees, etc., about which their *fairly excite the suspicion of their improper use to influence legislation at Albany and elsewhere;* and of which the *unauthorized payment* by President Winston of $3,500 to George W. Miller, the then Superintendent of the Insurance Department, to further the so-called 'Miller Life Bill,' is a notable example, which called forth that just and merited rebuke contained in the report of the Insurance Committee of this House in April, 1872, and some of which gave rise to the controversy between the President and the Actuary under whose direction the distribution of dividends had been acceptably made for many years, during which the company had attained its great position, and about whose capacity and integrity no question seems ever to have arisen until the will of the President was opposed by the Actuary under a sense of duty which caused the withholding of the usual form of audit to the company's statement of account which were known to be incorrect. No evidence was adduced to sustain the charge of an imposition upon borrowers of unlawful and oppressive rates of interest, and it is therefore dismissed.

"The collection of proxies by President Winston and Vice-President McCurdy, through the agents of the company, under their direction, in numbers amply sufficient to secure absolute control over the election of trustees, *is proven*, and its justification attempted on the ground of its necessity to thus guard against the intrusion of unfit trustees. But to this your Committee wholly dissent, *perceiving in such a practice a far greater danger to the policy-holders in thus empowering the officers to select the trustees at will, thereby virtually making the officers the masters instead of the servants of the policy-holders*, who do not seem to have fully comprehended that the charter of the company, in giving them the right, imposed upon them the duty to elect the trustees without deference to the will or wishes of the officers of the company, and thus to maintain and directly exercise the power to correct and *remedy defective or unfaithful management of its affairs.*

"The charges above alluded to constitute the gravamen of the alleged libels by the petitioner, English, upon President Winston, and your Committee feel it incumbent upon them to state, that whilst the petitioner, English, has been guilty of intemperate and harsh criticisms upon President Winston, others who have not been molested *have in language more temperate, but with even greater severity, publicly arraigned President Winston upon the same charges;* and as there is *much foundation in truth* in the *allegations of the petitioner*, English, it is im-

probable that a jury would award President Winston damages at all commensurate with *the enormous amount which he claims to have sustained*, and that therefore the bail required of the petitioner, English, is *excessive and oppressive;* that his imprisonment is *a just cause of grievance* and a proper subject for relief. And further, that as it is *apparent* to your Committee that whilst President Winston *is nominally the plaintiff in the suit*, the *proceedings are in fact conducted by and at the expense of the Mutual Life* Insurance Company, thereby *showing that personal liberty may be abridged and unjust and illegal punishment inflicted through f rms of law by a powerful corporation arrayed against an individual*, and in the opinion of your Committee *demonstrating the necessity of such legislation* upon the law of libel as will prevent the infliction of punishment until guilt has been clearly established.

"And your Committee would respectfully recommend the immediate passage of Assembly Bill No. 1064, entitled 'An act in relation to orders of arrest in actions to recover damages for slander or libel, or on a promise to marry.'

"All of which is respectfully submitted.

"C. W. HERRICK, *Chairman*,
"E. S. WHALEN,
"N. A. WHITE,
"E. TOWNSEND."

No jury could deliver a worse verdict than this. A more severe sentence has never been passed on the officers of any company. But is it too severe? No unprejudiced friend of the great cause of insurance will think it is. Nor is it through any ill-will toward either Mr. Winston, or Mr. McCurdy, that we say so, for we entertain no such feeling. We present our readers all that is material of the report without any garbling, only marking in italics some of the more significant passages, partly because we feel that it should receive as much publicity as possible, and partly because it declares the worst criticisms we have made for twelve years past on the Mutual Life and its officers to have been but too well deserved. But although it is in no spirit of exultation that we place upon record this sentence of condemnation, we hold that the public has good reason to exult, that amid so much corruption four men are to be found in our state legislature which the Mutual Life, or its managers, cannot purchase. We do not know any of these gentlemen personally, but we say, most cordially and earnestly, all honor to the four.

We cannot say the same of the three who issue the "minority report." This is too much like the "reports" in regard to the Mutual Life to which the public has been accustomed for several years past. We will not say that the Messrs. Abbott, Blessing and Campbell have been "seen" in a proper or improper way in regard to this matter, although many are ill-natured enough to impute something of that kind to them. Yet those who examine the document carefully will see that after all it does not afford Messrs. Winston and McCurdy much comfort under their condemnation by the majority. This we think will be sufficiently seen from its concluding remarks:

"That, in view of the whole case, your Committe must decline to *commit themselves to the support of any of the charges* made against the company in question

but, in order that the nature of the charges themselves, and the refutations or explanations of them offered by the company, may be fully understood, they beg leave to lay before your honorable body the testimony in full, and respectfully recommend that it be printed at large for the information of the legislature and of the public.

"Finally, for the purposes specified in the former part of this report, and to *secure more perfectly the personal liberty of the citizen and the freedom of the press against the abuse of judicial proceedings to personal ends*, your Committee respectfully recommend the enactment of the following bill."

The words we have italicised are virtually a condemnation of the plan of Winston, and fully sustain the views we expressed on the subject three months ago. Indeed, these words should be held to exculpate the minority from all dishonorable imputation in reference to their course in this matter. If not, the bill which they recommend to the legislature, and which we subjoin in its integrity, should have that effect:

"*An Act in Relation to Orders of Arrest in Actions to Recover Damages for Slander or Libel.*

"The People of the State of New York, represented in Senate and Assembly, do enact as follows:

"SECTION 1. No person in any civil action to recover damages for slander or libel shall be held to bail in any greater sum than two thousand dollars, or imprisoned or restrained of his liberty by reason of any order of arrest requiring him to give bail in any greater sum than that named in this section.

"§ 2. If more than one action to recover damages for slander or libel be pending at the same time on behalf of the same plaintiff against the same defendant, the defendant shall not be held to bail, or imprisoned, or restrained of his liberty, by reason of any orders of arrest requiring him to give bail in the aggregate in any greater sum than five thousand dollars.

"§ 3. This act shall apply to all orders of arrest in civil actions to recover damages for slander or libel now pending, in which any persons are now held to bail, or imprisoned, or restrained of their liberty. In all such actions in which persons are now held to bail, or imprisoned, or restrained of their liberty, upon orders requiring them to give bail in larger sums than are specified in this act, it shall be the duty of the courts, in which such actions are pending, to so reduce the bail that it shall not exceed two thousand dollars in any one case, or five thousand dollars in the aggregate, if there be more than one such action pending between the same parties in which the defendant is required to give bail.

"§ 4. This act shall take effect immediately.

"F. ABBOTT,
"ANDREW BLESSING,
"TIMOTHY J. CAMPBELL."

The reader is now prepared, we think, to agree with us, that the chief difference between the majority report and the minority report is, that while the former condemns Winston & Co. directly and explicitly, the latter only condemns them indirectly, or by implication. One, as well as the other, fully recognizes the sentiment to which we gave expression three months ago, namely that the "American people have far too much generosity not to *frown grimly* on those who,

having a giant's strength (especially in the form of wealth), use it like a giant *in oppressing the weak.*" *

But thus condemned as the worthies of the Mutual Life are, on all sides, they have recourse, as usual, to their characteristic plan of "white-washing." This time the process assumes the form of a long memorial, or petition to the legislature, quoting as conclusive evidence of honesty, integrity, innocence, etc., a "report" made by certain members of the board of trustees and certain policy-holders. This document is a veritable curiosity. If it does not presuppose that the public has no more sense or perception than an overgrown baby in swaddling clothes, it at least presupposes an enormous amount of silliness and credulity. After this disinterested, impartial tribunal has duly "endorsed" the similar performances of all its predecessors, the memorial proceeds to say:

> "That the persistence of the assailants of the company in repeating their attacks, and endeavoring to prejudice the public mind against it by the repetition of them, after *so many and complete refutations*, evinces a state of mind so hostile, *not to say malicious*, toward the company and its officers, as to *deprive them*, with all impartial minds, of *any just claim to consideration.*"

If any of our readers can read this passage without laughing, we certainly cannot compliment them on their perception of the ridiculous in the art of Mutual "white-washing." It would be an injustice to Barnum to give the above as a specimen of his style, when the great charlatan is describing his woolly horses and Fee Jee mermaids, for Barnum has sense enough to avoid being caught himself, in his own trap. Probably it is "the assailants" that are meant by the worthy memorialists as the parties deprived, "with all impartial minds, of any just claim to consideration," but in our humble way of reading the announcement we can only refer that interesting phrase to "the company and its officers." Whether it was intended to have this bearing or not, we confess we are rather inclined ourselves to the opinion that there is a peculiar fitness in it "in that connexion;" although the grammar of the passage might have been improved by having it read, that "the white-washers of the Mutual, including the president and vice president, have done their work, from time to time, in such execrable style as to deprive them, with all impartial minds, of any just claim to consideration."

But, be this as it may, the Mutual Life and its officers are pretty fully convicted of the worst charges we have ever made against them. Yet, there are several of those companies which make loud pretentions to honesty, stability, etc., which we regard as vastly less reliable at this moment than the Mutual. Thus, for example, if we were forced to make a choice, among the policies of the Mutual, the Ætna, the Home, the Traveller's, the New York, the Globe, the Brook-

* *Nat. Quar.* Rev. No. LII. p. 408, March, 1873.

n, the Penn. Mutual, the Metropolitan and the Universal, e should not hesitate for a moment to choose that of the utual. Nay, more, were we required to say which of all ose companies have the most honest, or least honest managers, we ould feel considerably puzzled. We would readily admit, however, at there are far worse among the lot than either Winston, or cCurdy. Certainly we would rather take the word of either than at of Batterson, Bouck, Freeman, Ripley, or Knapp. Not that we uld have much faith in the *ipse dixit* of the Mutual gentlemen, but ry slender as our faith in them is we must confess that our faith in e other parties mentioned is still more slender. Again, were we re-ired to decide between Batterson and Bouck, and between Ripley d Freeman, we think that, upon the whole, we should rather trust tterson and Freeman, for, if we have but exceedingly little faith in her, we have much faith in the ancient adage, of two evils choose e lesser.

There was a time when it would have been unjust to place the New rk Life, the Ætna, or even the Globe Mutual in this category; re was a time when the chief managers of these companies seemed ave no intention or wish less honorable or less honest than to deal rly and even liberally with their policy-holders. And our readers y remember that as long as this semblance appeared to have any l foundation to rest upon not a word was uttered by us against those ties. On the contrary it afforded us pleasure to give the n full dit for what they seemed to be. Now we give them credit on the ne principle for what they seem to be. We may be mistaken in arding them as sadly degenerated; but if we are, so are a large portion of their policy-holders.

We are fully aware of all the objections that may be made to our nparisons and estimates; but we have never urged our readers to ept either as correct or just any further than they found them to be on examination. May we not again call attention to the undeniable t that there has not been one of the many companies that have sed out of existence which has not accused us again and again, rough its organs, of having done it gross injustice. Nor does the chor Life, the last that has died thus far—except there has been a ath within two or three days—form an exception. While the insur-ce journals lauded both the Anchor and its Fisher, as superior to other Anchors and Fishers, we felt constrained to denounce both as uds, but without the least passion, malice, or ill-will. Those who aised the Anchor *ad nauseam* when so far alive as to be able to pay ney, now overwhelm its corpse with abuse. With the dead insur-ce companies we have nothing to do further than to point out their rpses as a warning to those who refused to be convinced in time at their death was inevitable. We mention the Anchor now, not cause there was anything peculiar in its case, but because, being the

last of the departed, its history is more familiar to our readers than that of the other extinct members of its tribe whose various prognoses we have repeatedly given in these pages, always warning the friends and dependents of the patients that a fatal issue might be expected at any moment; the final symptoms being convulsions, paralysis, coma, and certain retrograde movements on the part of insurance editors, reminding the initiated of the rats and the sinking ship.

This reminds us of poor Phipps, compared to whom even Niobe is scarcely an object of pity. True, the offspring of the daughter of Tantalus were different from the progeny of Phipps. Besides, Niobe did not sell her children one by one like Phipps. Still less did that unhappy lady try to cheat those who were generous enough to aid her in supporting her children. But the pitying gods changed Niobe into stone so that she might forget her sorrows. Why do not the pitying gods, or goddesses, change Phipps into some other *hard* substance—*brass*, for instance? that is if it be possible, according to modern occult science, to make him any more *brazen* than he is.

Just as we are about to pass on to notice some curious recent amalgamations a friend asks us how it is that the Park Bank has become at once a nursery, an hospital, and a grave for life insurance companies of the Phipps species. The question rather puzzled us for a moment or two, until we thought of the almost miraculous efficacy ascribed by the soft-headed and long-eared portion of our fellow-citizens to the "Health Lift," an institution which has its head-quarters in that building. Whether it be this, or the white marble, or the fabulous assets of the bank that have made it such a favorite resort for the class of life insurers now under consideration, we had some hope of the Commonwealth Mutual, until it mounted up beside the Health Lift. Sometimes there is a fellow feeling even among quacks. It may be, then, that the Health Lift doctors will do their best to lift the Commonwealth out of the slough into which it fell about two years ago. Nay, it may be that it will be successful, if it make the attempt; but as it is not our habit to deceive our patients by a false prognosis we must confess that in this case we fear the worst. We should have vastly more confidence in the efficacy of the Baxter steam engine as operated by Dr. Wm. D. Russell, of Park-place, in his own quiet, unostentatious way, than in all the doctors and surgeons, male and female, of a score of help lifts. We hear it rumored, though only vaguely, that the company is to be rechristened like others of its class. No doubt some policies might be sold by this means, which otherwise would not find a market; but if there is to be a new name may we not suggest the "Health Lift Cure All Assurance Association;" or, more appropriate still, perhaps, the "Worthless Mutual and Savings Bank Tontine Life Insurance Company."

We find we can give no attention to amalgamations this time, partly

for lack of time and space, and partly because we have not our laboratory at hand to test the various ingredients. For reasons somewhat similar we shall have to postpone our intended dissertation on transmigrations, although some of the more recent cases of the latter are highly interesting. But between the transmigrations of the Hindoos and Greeks, and those of our modern insurers, there is a difference which may well be called "material;" for, whereas among the former it was the soul of one party that passed into the body of another, among the latter it is the carcass of the defunct that so passes, or rather is devoured. Thus, for example, the carcass of the Hope Mutual has passed into that of the New Jersey Mutual. The latter was once a respectable company and seemed capable of living, on the Darwinian theory, without gorging itself with carrion; but now the name alone exists, the rest consisting in little more, so far as we can see, than the ghost of the Hope, or the Hopeless. The benevolent may well exclaim, then, "Alas, *poor* ghost!"

We have only space now to say a word or two of the revived Chamber of Life Insurance; but we shall not forget its objects, or its prospects. From what we have learned thus far we have much more faith in the new chamber than we had in the old. True, we should have preferred to see one of the officers of the Manhattan, or the Equitable, presiding, rather than one of those of the New York Life, although we have never questioned the honesty of Mr. Franklin. The worst we have thought of him at any time is that he was too easily made a tool of by some of his more wily and less scrupulous colleagues.

The companies of other cities are, it seems, not to be represented in the chamber, at least for the present. Assuming that if they were they would be represented as before, we think it at least as well that they should not; for, if our memory serves us, they were represented in the first chamber only by Batterson of the Travellers', and Bucklin of the Economical Mutual. We can hardly object to an arrangement which allows gentlemen like these to stay at home and mind their own affairs, especially as it is not likely that the better class of underwriters from other cities would come to New York to attend the meetings until they saw that the new organization was much better than the old. Most assuredly men like the principal officers of the New England Mutual, Phœnix Mutual, and Mutual Benefit, would pause and reflect a good deal before they consented to take a part in the proceedings. As the matter stands we suspect they would regard such companies as the Globe Mutual, Metropolitan, and Universal as not exactly the sort of associates it would be desirable to have in a chamber or elsewhere. They would probably also object to the Brooklyn Life, but of the rest they could not justly complain. There are none acquainted with the facts who will not readily admit that it is a vast improvement to have Mr. Frost of the New York Continental in place of Mr. Batterson of the Travellers', and Mr. Gill of the Guardian Mutual

instead of Mr. Bucklin of the Economical Mutual. Another fact to be taken into consideration by the companies of other cities is, that Mr. N. D. Morgan of the North America, vice-president of the chamber, has fully vindicated himself and his company since he occupied a similar position in the old chamber. Since there is thus a "working majority" of men whom all acknowledge to be irreproachable in character, and of unquestionable intelligence and ability, we see no reason why the new organization may not be expected to produce important results.

True, we miss some men in the new chamber who took an active part in the proceedings of the old, and who had always something to say which was at once practical and brilliant. Foremost amongst these was Mr. William A. Jones, who has recently resigned the presidency of the New York National, the duties of which he had discharged so faithfully and efficiently since the organization of that excellent, though modest and unpretending company. Although Mr. Jones has been succeeded by a gentleman in every way qualified for the position—although there need be no fear of the management of the National as long as its vice-presidency is filled by a HALSEY—still all who have known Mr. Jones as an underwriter will feel that his retirement is a positive loss to the insurance guild, both intellectually and morally. We beg leave to insist on having either of the two Halseys in the chamber, if not as officers, at least as speakers or advisers. Anotherexcellent acquisition to the new chamber would be Mr. Nichols of the Knickerbocker. And what of Mr. De Witt, of the United States Life? We do not see his name among the *personnel* of the chamber thus far. Will not Mr. Hyde of the *Equitable* or Mr. Wetmore of the *Security* see to this, knowing as they do that, although Mr. De Witt is subject to little whims from time to time, he is undoubtedly a man of talent and a shrewd, thoughtful underwriter.

We still refrain from making criticisms on fire companies, feeling that it would be hardly fair to examine their pretentions too closely so soon after the great fires.* We shall be all the more readily excused on this occasion when it is borne in mind that our present article did not contemplate particular estimates of any companies, life or fire, its main object being to show by two or three illustrations that the way of the transgressor is hard, and that those whom the National Quarterly denounces as transgressors, though more in sorrow than in anger, are very apt to prove themselves such, sooner or later, if only on the principle of Heine's diabolical lyric—

"Ich rief den Teufel und er kam
Und ich sah ihn mit Verwund'rung an."

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* Since the above was put in type we have learned that a new corporation, entitled the Ridgewood Fire Insurance Company of Brooklyn, has just commenced business. In general, we do not regard the organization of either a fire or life company as by any means an event at which the public has reason to rejoice, but rather the contrary. In the present instance, however, we feel confident that, at least, the new company will be intelligently and honestly managed. Mr. Lothrop, the president of the Ridgewood, was for many years the secretary of the Washington Fire; Mr. Scott, the secretary of the new company, having been also, for a long period, the assistant-secretary of the Washington. When such men have a cash capital of $200,000 to work upon, and, as we are informed, a strong, libe al board of directors to aid them in a contingency, it will take still more destructive fires than those even of Chicago and Boston, with their dearly-bought but valuable experience in those calamities, to wreck their new, well-built craft.

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ART. I.—1. *Lives and Maxims of the Illustrious Philosophers.* (*Περὶ βίων καὶ δογμάτων τῶν ἐν φιλοσοφίᾳ εὐδοκιμησάντων.*) By DIOGENES LAERTES.

2. *Geschicte .der Philosophie* (*History of Philosophy*). RITTER. Berlin.

3. *Anaxagoras, ou système qui prouve l'immortalité de l'âme, par la matière du chaos, qui fait le magnetisme de la terre.* La Haye.

4. *Plutarch in Lives of Pericles and Nicias.*

IT is but seldom that the most intelligent class—even those prone to research and investigation—make due allowance for what the present owes to the past. The tendency of this generation especially, is to regard itself as superior, both intellectually and morally, to all gone before it; and we fear it must be admitted that there are no people among whom this egotism and vanity are more strongly developed than among our own. So nearly universal is the sentiment that we occasionally find it difficult to restrain some of our contributors in its manifestation, for we came to the conclusion years ago that we could not regard our journal as an exponent of the

thought and opinion of our time and country without admitting, however unwillingly, a certain portion of this element into its discussions.

But, in order to counteract its evil consequences as far as possible, we invite the attention of our readers, from time to time, to some of the great thinkers of antiquity. It is in this spirit we have discussed, at intervals, the intellectual characteristics of Pythagoras, Epicurus, Diogenes the Cynic, and Seneca, as well as those of Homer, Sophocles, Euripides, Æschylus, Lucretius and Virgil, endeavoring to show how much our civilization is indebted to each. Nor have we any different object now in attempting to recall, in this article, some of the noble efforts and sublime ideas of Anaxagoras.

Before entering into any particulars in regard to the Ionian sage and scientist it may be well, for our present purpose, to remember that the most learned of the Greek philosophers were indebted to several nationalities, especially to the Egyptians and Hindoos, for much of the knowledge and wisdom which, while enabling them to become, as they did, benefactors of mankind, rendered their names imperishable. As the Romans were in the habit of deriving the most important part of their learning from the Greeks, so were the Greeks for many ages in the habit of regarding the Egyptians as the world's best educators. For more than three centuries no Greek was regarded as thoroughly educated until he had availed himself, to a greater or less extent, of the great schools of Egypt. Those who were unable to visit Egypt for that purpose felt that, in order to acquire the reputation of scholars of the first rank, it was at least necessary that they should receive some part of their education from Egyptian teachers. Now, when it is borne in mind that these three centuries embraced the golden age of Greek culture—the age of Pericles—some idea, however vague, may be formed of the high civilization attained by the Egyptians. Then how much did the Egyptians owe to the Hindoos? How much to the Phœnicians? How much to the Chaldeans?

There was not one of these nationalities which had not discoveries and inventions to boast of, as well as a high state

of culture; but the records of none have reached us, save those of the Greeks and Hindoos, and all we inherit even from these, though of inestimable value, are but fragments. Hence, that many sciences and arts have been lost is beyond question. A large proportion have, indeed, been re-discovered in modern times, but certainly not the whole. Of those re-discovered some have been improved upon, and been made more subservient to the use and benefit of mankind; but it is quite as certain that some are more imperfectly understood now than they were thousands of years ago.

This fact, incredible though it may seem to most people, might be easily illustrated. But it is sufficient for our present purpose to ask the reader to compare the thinkers of the present day to those of the time of Pericles, bearing in mind that even in that brilliant age—an age that sheds a peculiar lustre on the human intellect—those who promulgated their discoveries or inventions did so at the imminent peril of their lives. Yet how little do the most successful of our scientists reveal to us at the present day which is not foreshadowed in one form or another, if not enunciated in language sufficiently explicit for those for whom it was intended! Instances sufficiently striking of this will be seen as we proceed. Let those who doubt—those that think it impossible that there could have been any such scientific men thousands of years ago as there are now—ask themselves why were there such poets, such dramatists, such historians, such orators, such artists? Not indeed such poets, dramatists, historians, orators and artists as those of the present day, but incomparably greater.

But a great poem, a great drama, a great oration, or even a great work of art, is much more likely, for obvious reasons, to escape the ravages of time, than the most lucid treatise on science or art. And when the treatise is lost it is not likely that its author will be long remembered; when the discovery is forgotten it is not likely that the memory of the discoverer will long survive it.

Apart from these facts it must be admitted, on reflection, that neither discoverers nor inventors belong to the greatest

class of minds, since a portion of the most important discoveries and inventions have resulted from accident. In no country, ancient or modern, have scientists occupied so high a rank, intellectually, as those whose works have been devoted to the cultivation of the intellect, or the development and entertainment of the mind. Even Newton forms no exception in this respect. No competent judge will pretend that, brilliant and sublime as his discoveries have been, he will be as long remembered as Shakespeare or Bacon. Nor can it be said that the great astronomer has produced so profound, so powerful and beneficial, or so enduring an influence on English civilization, or English modes of thought, as either the great dramatist or the great inductive philosopher. We might pass through every country in Europe making similar comparisons, without overlooking Copernicus, Kepler, Galileo, Leibnitz or Laplace, and still be obliged to admit that the country of the most renowned discoverers has produced non-scientific men who will preserve their niches in the world's pantheon much longer, and be much longer held in veneration as benefactors of mankind, than those discoverers.

And if we turn back to Athens we shall find that the same principle holds good when applied to the intellectual capital of the ancient world; the world which has furnished models for all time in every department of human thought. Thus, for example, if it be asked who of all the Greek philosophers is held in highest veneration and esteem at the present day in any enlightened country, there will be no hesitancy among intelligent men in pointing to Socrates, the philosopher who of all others paid least attention to science, his chief precept being that made so familiar to the English reader by Pope, *i.e.*,

"The proper study of mankind is man."

We have ample testimony on this point, but need only turn to Plato or Xenophon. "He (Socrates) was of opinion," says Xenophon, "that one should devote some time to astronomy, in order to be able to tell the hour by the stars, what day of the month and what season it is, in order to know when, during the night, to relieve a sentinel; when it is best to go to

sea, or make a voyage. And he says that all this may be learned easily by conversations with sailors, or with those who hunt at night. But to wish to penetrate further, to know what stars are not in the same declination; to wish to explain all the different movements of the planets, and know how far they are from the earth, in what times they perform their revolutions, what are their influences; to all this he was strongly opposed, for to him these sciences seemed entirely useless; not that he was ignorant of them, but because they required a man's whole time and diverted him from many other good occupations."*

But the subject of our present article was not alone a scientist. He was a philosopher in the best signification of the term, and as such his pupils include some of the greatest names that have reached our time. Anaxagoras was born at Clazomenæ, in Ionia, about the 70th olympiad, 500 years before Christ. He belonged to an ancient and honorable family, and inherited a large fortune from his father. But it was not on riches, but on knowledge, that Anaxagoras set his heart; nor was he satisfied with acquiring knowledge without imparting it to all who would appreciate it. First, he studies under the tuition of the most famous educators of his time, including Anaximander, the philosopher.

Having attained the highest distinction among his fellow-students at Athens, he travels into Egypt and learns all he can from the priests of that country, who were universally regarded as the greatest scientists of their time. Returning to his native city he came to the conclusion that the possession of riches was incompatible with success as a teacher. Accordingly, he partly bestowed his inheritance on his friends and partly divided it among the poor, retaining scarcely sufficient to procure him the necessaries of life. Even this small portion he parted with in time, resolving to depend exclusively on the voluntary contributions of his pupils.† At the same time he

* *Memorabilia of Socrates.*

† The student of the classics will hardly object to be reminded that Cicero has some fine thoughts on this love of knowledge and tranquility: "Eadem autem alii prudentia sed consilio ad vitæ studia dispari quietem

resolved to take no part in public affairs. The latter resolution prompted one of his friends to ask him did he care nothing for his country. His reply was characteristic. While raising his hand to the skies, he said, "Yes, I have an extreme care for my country."*

Diogenes Laertes informs us that he was but twenty years old when he settled at Athens, and that he continued to teach there for thirty years. Among his pupils, according to the most reliable authorities, were Archelaus, Empedocles and Euripides, as well as Pericles. Some claim that Socrates and Themistocles were also his pupils. There is good reason to believe that the claim is well founded in regard to the former, but if we are to accept the chronology of Plutarch,† who is rarely much wrong in that particular, Anaxagoras cannot have been the instructor of Themistocles. This, however, is not material. If he was not the teacher of the hero of Salamis and the conqueror of Xerxes, he was the teacher of much greater men. Had he numbered none among his pupils but Pericles and Euripides, they would have shed sufficient lustre on his name as an educator. Whether Socrates was instructed by him or not, it is certain that the great ethical philosopher knew him intimately; but, Socrates being rather opposed, as we have shown above, to devoting much time to any of the sciences not regarded as more or less useful, he was sometimes disposed to be satirical in discussing the scientific doctrines of Anaxagoras.

Anaxagoras was not the founder of the Ionian school to which he belonged. This honor belonged to Thales, the Milesian. To the same school belonged Anaximander and Anaxamines, both of whom were also Milesians. But in order to estimate approximately how much credit is due to Anaxagoras—nay, in order to be prepared to judge intelligently

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atque otium sequenti, ut Pythagoras, Democritus, *Anaxagoras*, a *regendis civitatibus* toto se ad cognitionem rerum transtulerunt, qua vita propter tranquilitatem, et propter ipsius scientiæ suavitatem, qua nihil est hominibus jucundius; plures quam utile fuit rebus publicis, delectant.—*De Oratore*, l. iii.

* Diog. Laert., lib. ii., sec. 6. † *Vide Life of Themistocles.*

whether it is probable, or improbable, that he was really the great thinker and discoverer which he is represented by the best authorities, it is necessary to take a brief glance at the condition of philosophy in his time. Especially is it necessary to have some definite idea of the amount of knowledge possessed by his predecessors in the Ionic school.

Was Thales, the founder of the school, a scientific man? Did he possess sufficient knowledge to qualify him to be a great teacher? The best reply to these questions is, that the greatest minds of his time, and since his time, have concurred in regarding him as an original genius, and as one who developed his genius by seeking knowledge, wherever it was to be found. Diogenes Laertes informs us that he astonished the Greeks after his return from Egypt, where he had long been under the tuition of the priests of Memphis, although some say that he taught his instructors to measure the pyramids by their shadows.

It is reasonably doubted by critics whether men who had pupils from all parts of the world, including Athens, could have been ignorant of so simple a problem. Be this as it may no fact in the history of science is more fully established than that it was he who invented the fundamental problems in geometry, that the circle is bisected by its diameter; that the angles of the base of an isosceles triangle are equal; that the vertical angles of two intersecting lines are equal; and that if two angles and one side of one triangle be equal to two angles and one side of another triangle the remaining angles and sides are respectively equal. These, be it remembered, are the great theories which enabled Kepler to win for himself the proud name of Legislator of the Heavens. Without them Laplace could never have given the world his *Méchanique céleste;* without them Newton could not have left so great a legacy to mankind as his *Principia.*

The peculiar philosophical doctrine of Thales was, that water, or humidity, ὑδωρ, is the fundamental principle of all things. He taught that all things, animate and inanimate, were produced from water, and that all things were resolved into water. Even the soul of the world, or God, he declared

to be composed of water,* while he declared the human soul to be a *motive force*, κινητικόν τι,† a doctrine which certain philosophers of the present day claim to be their original discovery!

Then for water Anaximander substituted the *infinite* (ἄπειρον), which in his view was God. All things he says contained in the Infinite is subject to change; but the Infinite itself is immutable and everlasting.‡ Anaximander, as well as Thales, is believed to have invented several important geometrical theorems, which are now included in the works of Euclid, but which they are is only a matter of conjecture.

The immediate successor of Anaximander in the Ionian school was Anaxamines, who substituted air for the water or humidity of Thales, and the Infinite of Anaximander. Thus, according to Anaxamines, air is the primitive universal element which produces all things, either in becoming condensed or rarified. The soul, he maintained, is an aerial substance; in his doctrine air is infinite, but all things produced from it are finite, as the earth, water, fire.

Such, in miniature, were the views entertained, and such the knowledge possessed, by the instructors of the subject of our present paper. Is there anything incredible, then, in the great discoveries ascribed to the sage of Clazomenæ? But this question can be the more easily answered when we glance, as we proceed, at the doctrines and labors of his pupils and disciples. In the meantime we return to our narrative.

Anaxagoras was dissatisfied with the system of his predecessors, regarding it as too materialistic to account for the active principle of the universe. So far as known he was the first of all the ancient philosophers to maintain that the universe was governed by an intelligent being. This being he called νοῦς (mind or intelligence). Accordingly, he enunciates the proposition that Intelligence is the great formative

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* Thales, Milesius, *aquam* dixit esse initium rerum; deum autem eam mentem, quæ ex aqua cuncta fingeret.—*De Nat. Deorum*, i, x.

† See Aristotle, *Concerning the Soul*, I. ii.

‡ Diog. Laert., ii. i.—Arist. *Phys.* iii, iv.

and ordaining cause of the universe; that it possesses omniscience, grandeur, power, energy and spontaneity; that it is simple and pure, and that, while distinct from all matter, it penetrates and permeates all things, and that, consequently, it is the principle of all life, of all sentiment, and of all perception. Anaxagoras was also the first to enunciate the propositions that nothing comes from nothing, and that there is no vacuum in the universe.

Among the various subjects which ancient historians and philosophers tell us he discussed were the earth's inclination, eclipses, shooting stars, meteors, the milky way, thunder and lightning, hurricanes, earthquakes, etc.* He was the author of several works, but only small fragments of them have been preserved. In one, for the preservation of which the world is indebted to Simplicius, the philosopher says: "The Greeks are wrong in thinking that things are generated, and that they perish, for nothing is generated and nothing perishes. But what is mixed, or separated is confounded, or distinguished; to be generated and to perish are with much more reason called composition and decomposition."

It were well that we had many fragments like this; but need we say that it is not always the best thoughts that are most likely to be preserved? There is every reason to believe that, in the case of Anaxagoras, it is in general the crudest that are preserved. Nay, there is little doubt that some of his thoughts have been grossly misrepresented, for some attributed to him are too absurd to be consistent with his well authenticated sublime thoughts. At the same time it should be remembered that the purest metals and the most perfect gems are generally found more or less incrusted with the basest materials. We should not lose sight of the fact, that the greatest of modern discoverers have promulgated theories that have since been proved not only to be absurd but ridiculous. This is true even of Kepler and Newton, as well as of Tycho Brahe. Especially has the Legislator of the

* See Plutarch's *Morals,—Of those Sentiments concerning Nature with which Philosophers were delighted.* B. i, c. ii, *et seq.*

Heavens—he whose great Laws now form the basis of mathematical astronomy—claimed to be the discoverer of things that have proved as absurd myths as those of the most vulgar astrologists.

When we come, however, to see what were the absurdities of Anaxagoras we shall find that the crudest of them make a much nearer approach to reason and truth than many theories advanced at the present day by some who claim the highest rank as investigators and scientific men. Let us assume that his rivals, those jealous of his fame, and opposed to his school, have not misrepresented him for the purpose of bringing ridicule on his system, in attributing to him the opinion that the visible heavens are composed of stones, which are prevented from falling on us only by the great velocity of their movement. Even this would show that he was acquainted with some of the most interesting phenomena of motion. But there is no good authority for it. It is otherwise with his knowledge of the sun, moon and planets. For this we have as reliable authority as the ancient world presents us on any subject. "Anaxagoras," says Plutarch, "was the first who, with any clearness and certainty, showed in what manner the moon was illuminated and overshadowed. But he was an author of no antiquity, *nor was his treatise* much known; it was confined to a few hands, and communicated *with caution* and *under the seal of secrecy. For* the people had an aversion to natural philosophers, and those who were then called *meteorolescha* (*inquirers into the nature of meteors*), supposing that they injured the divine power and providence by ascribing things to insensate causes, unintelligent powers, and inevitable necessity. Protogoras was forced to fly on account of such a system; and Anaxagoras was thrown into prison, from which Pericles, with *great difficulty*, got him delivered."*

Nor did he merely explain why the moon was eclipsed; he, also, declared that it had mountains and valleys, and was inhabited. The sun he regarded as a mass of fire, larger than

* Plut. in *Nicea.*

the Peloponnesus.* Naturally this seems a small estimate, at the present day, of the size of the great orb of our system, but be it remembered that the philosopher was in daily fear of arrest for declaring that the sun and moon were large masses of matter instead of being gods as they had hitherto been regarded. Anaxagoras was, also, the first, as far as history or biography informs us, who declared that our eyes are incapable of discerning the true color of objects, that our senses deceive us, and consequently that it is not for them but for reason to judge of the nature of things.† Perhaps, if his theory of optics were known in our time, it would be found not much inferior to that of Newton, or Kepler. But as it is lost, nothing is easier for those disposed to glorify the moderns at the expense of the ancients—that is, those disposed to show their own superiority in acumen and knowledge —than to represent it as an absurd, puerile theory, the same as they have represented Anaxagoras as regarding the sun only as a large burning stone.

It is true that ages have now elapsed since these disparaging representations were made; but they were made on the same principle that similar representations are made now in regard to the ancients—that is, for the purpose of showing how credulous and unsophisticated those ancients were, and how sadly they groped in the dark as compared to the new race of philosophers and discoverers. But then, too, the ancients had their defenders. Prominent among these was Casaubon, who proved to all capable of being convinced, that Anaxagoras neither regarded the sun as a huge burning stone, nor as a burning globe of iron, but simply as a globe of igneous matter.‡

But as we have already remarked, however profound was the scientific knowledge of Anaxagoras, and however useful that knowlege proved to his contemporaries, as well as to

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* Diog. Laert., l. ii. † Sixtus Empiricus, *Adv. Mathem.*, l. vii.

‡ Videtur mihi Anaxagoras per μυδίζον διάπυζον non tam lapidem aut ferrum, quam globum quendam igneum λιθώδη et βαζύν, ut ait Plutarchus, intelligere voluisse. *Isis*, Casaubon.

their posterity, he was not only a mathematician, an astronomer, an anatomist and a chemist—he was a great educator, a great cultivator of the intellect and developer of its resources. Even at the present day the evidences of this are beyond question. Whatever doubts may be entertained as to his having been the instructor of Socrates, Euripides, Empedocles or Archelaus, it is admitted by all that he was the instructor of Pericles, who did more for Greek culture and Greek art than all the kings and princes of his time, and for centuries before and after his time. If we turn to the best authorities we shall be able to judge to some extent how much the pupil owed his master in this instance. Speaking of Pericles, Plutarch proceeds: "But the philosopher with whom he was intimately acquainted, who *gave him that force and sublimity of sentiment superior to all the demagogues*, who, in short, *formed him* to that admirable dignity of manners, was Anaxagoras, the Clazomenian. This was he whom the people of those times called νοῦς, or *Intelligence*, either in admiration of his great understanding, and knowledge of the works of nature, or because he was the first who clearly proved that the universe owed its formation, neither to change, nor to necessity, but to a pure and unmixed mind, who separated the homogeneous part from the other with which they were confounded. Charmed with the company of the philosopher, and instructed by him in the most sublime sciences, Pericles acquired not only an elevation of sentiment, but a loftiness and purity of style far removed from the low expression of the vulgar."*

Further on the historian shows that neither teacher, nor pupil, devoted himself to the study of science through mere curiosity, or the love of fame, but for the purpose of making it available for the use and benefit of mankind: "From him," continues Plutarch, "he learned to overcome those terrors which the various phenomena of the heavens raise in those who know not their causes, and who entertain a tormenting fear of the Gods by reason of that ignorance. * *

* Pericles in *Vita.*

We are told there was brought to Pericles, from one of his farms, a ram's head with only one horn, and Lampo, the soothsayer, observing that the horn grew strong and firm out of the middle of the forehead, declared, that the two parties in the state, namely those of Thucydides and Pericles, would unite and invest the whole power in him with whom the prodigy was found. But Anaxagoras having dissected the head, showed that the brain did not fill the whole cavity, but had contracted itself into an oval form, and pointed directly to the point of the skull whence the horn took its rise." *

No writer on the subject, from the time of Anaxagoras and Pericles to our own, who can be regarded as an authority, from his researches and impartiality, gives any different estimate from this, but fully concurs in it. We need only give one instance illustrative of this, especially as this one is worth a dozen: "It is well known," says Quintilian, "that Pericles, of whose eloquence, though no visible proofs of it come down to us, not only historians, but the old comic writers, a class of men not at all inclined to flattery, say that the power was *scarcely credible*, was a hearer of Anaxagoras, the great natural philosopher."†

We shall now turn for a moment to one or two of the other pupils of Anaxagoras. We are informed on the best authority that Empedocles was distinguished not only as a philosopher, but also a naturalist, physician, and statesman. His chief doctrine was, that All was originally one; God eternal and at rest; that there is no real destruction of anything, but only a change of combinations; and that we are to reject the testimony of the senses, pure intellect alone being capable of arriving at a knowledge of the truth.‡

Archelaus, the immediate successor of Anaxagoras, as well as his pupil, was called the "Natural Philosopher," by way of eminence, because, like his great master, he devoted his chief attention to the study of nature. His fundamental principle was but a slight modification of that of Anaxagoras.

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* Plut. in *Pericles*. † *Institutes of Oratory*, B. xii., c. ii.

(‡ Plut. *Isis and Osiris*, xxvi.—Arist. *Metaph.*, 1, iii, iv.)

First, he taught, all was one, but in time fire and water were separated by the action of the former on the latter. Then water, by its motion, gave birth to air; the earth was held together by air, and the air by fire. While the earth was hardening by the action of heat, a certain mixture of warmth with cold moist particles was effected, of which animals of various kind were formed. Archelaus, like his master, taught that a great Intelligence ordained and ruled the universe, and, like him, denied that that great Intelligence, whether it be called God, or Nature, was the immediate cause of either good or evil.

We need hardly remark that the scanty fragments of the teachings of Archelaus and Empedocles which have come down to our time are but ill calculated to do justice either to themselves or to their teacher. Even regarding Pericles we have little more than what his contemporaries say. But there is one pupil of Anaxagoras who has left us abundant data whereby to judge of the culture and development of his intellect. The noble tragedies of Euripides do honor to both teacher and pupil. No other works of antiquity that have come down to us display, without ostentation, so large an amount of multifarious learning, or contain so large a number of noble precepts, or of portraitures that do honor to humanity, with the sole exception of the Iliad and the Odyssey. Even Homer has not paid a finer or more eloquent tribute to female wedded love than that exquisite chorus in the *Alcestis*, which is translated thus, but to which no translation can do adequate justice:

> "We will not look on her burial sod,
> As the cell of sepulchral sleep:
> It shall be as the shrine of a radiant god,
> And the pilgrim shall visit that blest abode,
> To worship, and not to weep.
> And as he turns his steps aside,
> Thus shall he breathe his vow—
> Here slept a self-devoted bride:
> Of old, to save her lord she died,
> She is a spirit now."

We may also ask who has described true liberty better

than the pupil of Anaxagoras, the fellow-pupil of Pericles, who was, confessedly, one of the most enlightened and liberal statesmen that ever stood at the head of republic, kingdom, or empire, if, indeed, it can be said that he has had an equal in ancient or modern times. It is admitted by Blackstone, the great English jurist, that neither himself nor any other commentator on jurisprudence could define liberty of speech, or liberty of the press better than it is described by Euripides in the lines translated thus:

> "This is true liberty, when free-born men,
> *Having to advise the public, may speak free;*
> Which he who can and will, deserves high praise:
> Who neither can, nor will, may hold his peace."

It is true that the philosopher's mode of explaining his system is defective; but its defects were not left for refutation to the moderns; they were refuted in turn by Socrates, by Aristotle, by Lucretius, by Tertullian,* etc. This will be the better understood by those who have not devoted sufficient attention to the system of the Ionian school, when we remark that according to the *Homœomeny* of Anaxagoras, no one body differs from another in its elementary composition, and what constitutes the apparent diversity is the predominance of any one element over the rest; all elements, he affirmed, being contained equally in one substance as in another. It is to this theory Socrates alludes when he discourses as follows: "For, if the soul did not preside over the body, but the body over itself, and cookery and medicine were not examined into and distinguished by the soul, but the body itself decided, estimating things by its own gratifications, that tenet of Anaxagoras would prevail extensively, friend Polus (for you surely are acquainted with it), that is, all things would be confounded together, things medicinal and healthy,

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* Quam Anaxagoræ turbata sententia est initium enim omnium commentatus animum, universitatis oscillum de illius axe suspendens, parumque eum adfirmans et simplicem et incommisscibilem, hoc vel maxime titulo segregat ab animæ commissione et tamen eundem alibi animæ addicit.—Tertullian, *de Animâ.*

and pertaining to cookery, being undistinguished from each other."*

In another dialogue the great ethical philosopher proceeds thus:

"*Socrates.* But what, do you not believe with Anaxagoras, that intellect and soul orders and holds the nature of everything else?

"*Hermogenes.* I do.

"*Soc.* It will be proper, then, to give this name to that power which carries and holds nature, *φυσέχην*; but it may be called more elegantly, *ψοχή*."†

Now, if we take into account the testimony of Xenophon, we shall see that there was no philosopher of his time, or indeed of any time, whom Socrates held in higher estimation than he did Anaxagoras; for the historian tells us that the moral philosopher had been made afraid of the study of nature by the persecution suffered by the natural philosopher. This serves to explain the apparent caution with which Plato introduces the views of his master in regard to Anaxagoras, as in the following instance: "But having once heard a person reading from a book," says Socrates, "written, as he said, by Anaxagoras, and which said that it is intelligence that sets in order and is the cause of all things, I was delighted with this cause, and it appeared to me in a manner, to be well that intelligence should be the cause of all things, and I considered with myself, if this is so, that the regulating intelligence orders all things, and disposes each in such way as will be best for it."‡

Sometimes Aristotle also seems a little timid for the same reason; at other times he is somewhat disposed to disparage the labors of Anaxagoras. Some think that both feelings are evinced in the following passage: "For if any one should suppose," says Aristotle, "that Anaxagoras mentions two elements, he would form his opinion most especially in accordance with a theory which, although that philosopher himself did not enunciate distinctly, yet, indeed, would, as a necessary consequence, follow in the footsteps of those who intro-

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[illegible] in *Gorgias*. † Plato in *Cratylus*. ‡ Plato in *Phædo*.

l this dogma, for, otherwise, would even the assertion be ·d—that all things from the beginning have been in a of mixture," etc.*

lsewhere the Stagyrite is much more explicit, but also disparaging. Having first examined Hesiod's views of fficient cause of the universe, he proceeds: "For Anax- ıs also employs mind as a machine for the production of rderly system of the world; and when he finds himself ɔrplexity as to the cause of its being necessarily so, he drags it in by force to his assistance, but in the other ıces, he assigns as a cause of the things that are being ıced, everything else in preference to mind."†

ut no critic of ancient or modern times has criticised the *œomeny* of Anaxagoras more sharply or more philo- cally than the Roman poet, Lucretius. His refutation of hilosopher's doctrine as to the elements of all things ; alike, is one of the finest passages in the first book of reat poem. With admirable humor the poet shows the ·dity of maintaining that the bones, muscles, entrails, l, etc., of animals are all composed of exactly the same ents—the only difference between the bones and the en- being that a certain element preponderates in one, while tain other element preponderates in the other, or *vice* ·.‡

t is a sad reflection that, great an educator as Anax- ıs was, much as he had done for his country—nay, for ıankind—by his discoveries and inventions, he lived to

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ristotle's *Metaphys.* c. viii. † Aristot. *Metaph.*, B. i, c. iv.

‡ Nunc et Anaxagoræ scrutemur Homœomerien
Quam Græci memorant, nec nostrâ dicere linguâ
Concedit nobis patrii sermonis egestas.
Sed tamen ipsam rem facile est exponere verbis
Principium rerum, quam dicit Homœomerian.
Ossa videlicet è pauxillis atque minutis
Ossibus, sic et de pauxillis atque minutis
Visceribus viscus gigni; sanguenque oreari,
Sanguinis inter se multis coeuntibus guttis, etc.

De Rerum. Naturâ, l. i, 830, *et seq.*

realize but too bitterly the fact that he had carried his contempt of riches too far; for in his old age he found himself so completely neglected that he concluded there was nothing left for him but to cover his head with his mantle and die of starvation. Even when this resolution became known Pericles and Archelaus were the only pupils or friends of his who seemed to take any notice of it. The great orator, however, proved true to him to the last, except that the cares of state sometimes absorbed his thoughts to such an extent that he could remember nothing else. The account of Plutarch is very touching. "This very Anaxagoras," he says, "lay neglected and unprovided for, insomuch that the poor old man had covered up his head and was going to starve himself. But an account of it being brought to Pericles, he was extremely moved at it, ran immediately to him, expostulated, entreated; bewailing not so much the fate of his friend as his own, if his administration should lose so valuable a counselor. Anaxagoras, uncovering his face, replied, "Ah, Pericles! *those that have need of a lamp take care to supply it with oil!*" *

The reader has already been informed of the great difficulty Pericles had in saving the philosopher's life when he was accused of atheism, chiefly for proclaiming that the sun and moon were not gods, as they had hitherto been regarded by the Greeks, but the former a globe of fire and the latter a body having mountains and valleys, and other physical characteristics similar to those of the earth. It is said that the great scandal he caused by this alleged impiety was aggravated by his saying, also, that both luminaries were perishable, and would have an end though they might endure for myriads of ages; so that Ossian or Macpherson was not the first who exclaimed to the great orb,

"But thou art perhaps like me for a season; thy years will have an end. Thou that sleep in thy clouds, careless of the voice of the morning. Exult, then, O sun, in the strength of thy youth."

Even Pericles failed to procure his acquittal. He was condemned in his old age to perpetual banishment, and fined five

* Plut. in *Pericles*.

talents.* After the judges had passed the sentence Pericles exclaimed, "Do you find he has committed any crime?" On their admitting that their only charge against him was his want of faith in not accepting the divinity of Apollo (the sun), one of the most powerful of the gods, Pericles said: "Then if you condemn him you condemn me, for I am his disciple. Rather believe me than his calumniators, and restore him his liberty."† Some biographers maintain that when Pericles addressed the judges thus, in his behalf, he was under sentence of death waiting from day to day for the hemlock draft.‡ Whether this was really the case or not, the appeal of Pericles in behalf of his teacher and friend was made at the risk of his own life; at least at the risk of losing his power as head of the state, and even his liberty. Fortunately he succeeded, however, but we are told that so great was the chagrin of the philosopher at finding such persecution the reward of his labors through life, he left Athens of his own accord, while so emaciated and feeble that he was scarcely able to walk.

It is creditable to human nature, with all its faults, that nothing has contributed more to the glory of Archelaus than that he insisted on accompanying his old and beloved master into exile; and never could be induced to part with him until, with pious care, he superintended his burial. Then he returned to Athens, to occupy the chair which Anaxagoras had occupied for thirty years, all surviving members of the Ionian school having unanimously declared that he was the most competent and most worthy to succeed the departed sage.

Lampsacus, in Mysia, was then remarkable for its superior enlightment. The inhabitants were a Milesian colony who had profited, in no slight degree, by the teaching of their illustrious compatriot, Thales. Accordingly, the Lampsacians received the aged philosopher with every mark of esteem, veneration and sympathy. Although he was sixty-nine years when he sought an asylum in Lampsacus, he continued to

* Sotion in *Successionibus Philosophorum*, apud Diog. Laert, l. ii.

† Hermippus in *Vitis*. ‡ Gatyrus in *Vitis*, apud Diog. Laert, lib. ii.

teach for three years afterwards. Elian, the philosopher, relates that the inhabitants dedicated two altars in honor of Anaxagoras. One to Truth, the other to Intelligence. It is said that some of his friends, seeing that his end was evidently approaching, asked him whether he wished his remains brought to Clazomenæ, his native city, after his death, and that his reply was: "It is not necessary; all places are equally near Hades."* We are also informed that when he was known to be at the point of death, the Lampsacians sent him a deputation consisting of the principal citizens, offering to consecrate to his memory all the honors he might wish. The philosopher gratefully declined the proffered honors, declaring that his only wish was that the anniversary of his death would be a vacation day for all children attending school. This favor was readily granted; and Diogenes Laertes informs us that in his time, centuries afterwards, the day was still devoted to that purpose throughout Greece and Asia Minor. There is much more philosophy in this wish of the dying sage than is apparent at first view. For his object was not merely to gratify youth by giving them a holiday, but to instil into the minds of young and old the precept that death, which, in one form or another, is inevitable to all, should be rather a source of pleasure than one of affliction to the living, especially when it is merely the result of old age, or the natural termination of a well spent life.

We had no expectation in commencing these pages that we could do justice to the life and character of Anaxagoras within the limits of a review article. Still we think we have shown from the best authorities that the modern world has produced few, if any, sages or scientists, to whom mankind are more indebted than to Anaxagoras. At least we may be permitted to hope that our article will serve to diminish, if only in a few instances, the prevalent self-glorification of the present age. The task is, we know, a difficult one; but it is not the

* Præclare Anaxagoras, qui quum, Lampsaci moreretur, quaerentibus amicis velletne Clazomenas in patriam, si quid ei accidisset afferi, "Nihil necesse est, inquit, undique enim ad inferos tatundem iræ est." Cicero, *Tuscul. Quæst*, l. ii.

less true on this account, that instead of our philosophers and thinkers of the present day being giants in intellect and knowledge, whereas those of thousands of years ago were mere pigmies—as those who praise most what is most worthless would have the world believe,—except in rare instances, the reverse of the picture is much nearer the truth.

ART. II.—1. *Essay Towards a Philosophical Language and Real Character.* By JOHN WILKINS. London.

2. *Eléments primitifs des langues decouverts par la comparison des racines de l'hébreu avec celles du grec, du latin et du français.* BERGIER. Paris.

3. *On the Theory of Language.* By W. BEATIE. Aberdeen.

4. *Essai synthétique sur l'origine et la formation des langues.* CAPINEAU. Paris.

IN the science of language, it is an accepted doctrine that the extensions of significance and consequent changes of form which a word may undergo, are by no means the result of arbitrary adaptation, but the organic growth of the word itself; that, figuratively speaking, a word is animated by a vital force, in virtue of which it branches upward and outward into various differentiations of form and meaning. But this organic development of words is not only conditioned by the varying aspects of nature, but also by those mental laws which regulate the association of ideas and the connection of thought with sense. Words have their root in the sense, but branch out in the atmosphere of the mind.

Language is primarily a collection of names. Even verbs belong fundamentally to the same part of speech as nouns—they are names. *To run, to be, to sleep*, do not differ from other nouns save in the fact that they name objects of a pecu-

liar kind. The verb-noun does not, indeed, assume its special verbal character till it is placed under certain relations of person, time, mode; it is then said to be finite, while in its substantive character it is called infinitive. In reality, however, the verb is always fundamentally substantive, the limitations under which it is placed being adjective to it. In English, and other analytical languages, these limitations are mostly indicated by separate words, which words, therefore, when the analysis of grammatical relations is carried to its ultimate point, may be conceived as adjective to the verb in its substantive character.

Again, the adjective is only the noun with a special function; it is the name of the particular accident of place, time or quality applied by way of limitation to the name of the substance; and the adjective-noun only then individuates itself as an adjective when it assumes certain endings or undergoes certain radical changes indicative of its adjective use.

The adverb is only the adjective used adjectively to a verb or another adjective, and is thus the noun at a second remove. In the speech of the uneducated, which often points back to the earlier stages of dialectic development, no grammatical peculiarity is more noticeable than the adverbial use of the adjective—a usage which was originally the regular one. The individuation of the adverb, as such, remained as a more advanced step in the refinement of speech.

As to pronouns, prepositions, and conjunctions, these lesser parts of speech either once were or still are adjective or adverbial in their use, and are all traceable with more or less readiness to verbal roots—to the noun, the name-word. Thus, all words, under whatever grammatical nomenclature they may fall, are philosophically identical in their nature—they are names. Comparative philology has also shown that all those suffixes which give special significance to words, or assign them special functions or relations, are traceable, directly or indirectly, to verbal roots. Language, then, is simply a collection of names.

Whether the noun distinctively as such, that is, as the name of concrete objects (objective noun, it may be called), or the

noun as the name of acts, of being, or states of being (which may be called the subjective noun) shall be considered prior in the order of development, is a point of philosophic interest, but one which we shall not pause to discuss. It may, however, be remarked that in language in its present state there are no nouns of objective meaning which have not leafed out, so to speak, from a verbal germ; the included verb may not always be known, but the analogy of similar formations will often point to its existence, and even perhaps reveal its form.

This fundamental identity in the parts of speech gives the clue to the most primitive modes by which words receive an extension of meaning. The same stock-word may branch out into a distinctively verbal, a substantive, an adjective, or an adverbial use, and individuate itself in each of these uses. But to this identity in the parts of speech is also due their reconvertibility—another important ground in the extension of the meaning of words. The skilful, practical botanist, taking advantage of the laws of plant-development, can transmute the various organs of the flower, one into another, the petal becoming stamen, the stamen petal. The genius of language does the like daily in its own sphere, verbs being made nouns or adjectives, nouns and adjectives becoming verbs, or assuming the functions the one of the other. The word *round* serves as a familiar illustration: "Round as an apple," "The round of the sky," "Our little life is rounded with a sleep," "The miller's wheel goes round and round," "Run round the corner." These phrases show the same word as an adjective, a noun, a verb, an adverb and a preposition. In actual usage there are, of course, limitations to this convertibility of the parts of speech, the custom of language restricting certain words to special functions. As a rule it may be said that no word can go back from its use as an adverb, preposition, pronoun or conjunction to its earlier uses as a noun, verb or adjective.

This evolution of the parts of speech from a common root is an induction from the facts of comparative grammar. We have now to point out the psychological basis upon which it rests as its ground of possibility. This basis consists in the

identity of the conditions of thought which underlie the parts of speech.

The verb, as such, is founded upon a fundamental recognition of force. The noun gives expression to a fundamental recognition of substance. The identity of the noun and the verb is based upon the identity of force and substance, force being conceivable only under the condition of substance, that is, as cause, and substance under the condition of force, that is, as effect. The adjective (including the adverb) is the recognition of the necessary limitations of force and substance in their identity; on the side of substance it represents quality, individuality, locality; on the side of force it represents degree, manner, time.

But to this principle of identity is due not only that grammatical extension of meaning which words undergo, but also those ramifications of word-meanings which may be classed under metaphor, applying this word not simply to the extraordinary or poetical uses of words, but to their ordinary acceptations.

Metaphorical extensions of word-meanings necessarily fall into the following classes: 1. Those resting upon the identity of force and substance, in consequence of which identity the name of a special force, an act, a process, may be transferred to the thing which especially manifests it, or through which it works; the cause to the effect; the act to the instrument, or the agent. Or the name of thing may be transferred to the force; the effect to the cause; the instrument or agent to the act.

2. Those resting upon the identity of force and its limitations, in consequence of which identity the name of a special force may be given to a peculiar quality or phenomenal condition which is frequently and conspicuously found in connection with it. Or the quality or phenomenal condition may give name to the force.

3. Those resting upon the identity of substance and its limitations, in consequence of which identity the name of a thing may be transferred to the quality or property by which it is most prominently characterized; the name of the whole

to its most characteristic part. Or the name of the quality, property, or characteristic use may be transferred to the thing; the part to the whole. But there is still another important head under which metaphorical extensions of word-meanings may fall, that namely of

4. Analogy, which consists in an identity of relations. This is one of the most fertile sources of the development and enrichment of language. Take a single example. The primary meaning of the Latin *legere* is to *pick up by hand*, but when letters or other ideographic signs come into use, an analogy is discovered between the act of picking up and gathering by hand and that of picking up and gathering by the eye, the act is the same, only the instrument and the material differ; hence the word used in the one case, applies also in the other, and *legere* thus gets its metaphorical meaning, *to read*.

Thus far, however, we have pointed out no principle governing the development of words, which reaches beyond the plane of the senses, no principle which of itself supplies a psychological basis for the naming of supersensuous objects, such as truth, virtue, honor, thought.

Words have their beginning in sensuous perceptions; they are primarily the names of those things only of which the senses take cognizance. But if language did no more than this, it would as a means of communication fall miserably short of the needs of man, who would then have no names for those abstract ideas which give to human intercourse its intellectual and spiritual character. In order, then, to incorporate these in speech, it is necessary to draw from the fields of sense and to give to words which in themselves have only a natural significance a meaning which is supernatural. By virtue of what organizing principle is this accomplished?

How it is that man has supersensuous notions which are denied to other animals, is a metaphysical inquiry with which we have nothing to do, and we shall therefore content ourselves with saying, that by the constitution of his mind man can think or, in other words, conceive abstractly only through the intermediation of form. Without form all thought is void, an

indistinguishable blank. Now at the foundation of form is the intuition of space, to the necessary conditions of which all our simplest and most primitive conceptions immediately conform. Hence we image unity as a point in space, multiplicity by the repetition of points, totality by the circle or the sphere, the finite by bounded space, the infinite by the negation of bounds. In all our fundamental intellections we think geometrically, in mathematical forms, and so indissolubly is thought wedded to these forms, that very few recognize the truth that these are mere images of a transcendent reality.

But cœval with the intuition of space, and implied in the act of its cognition, is the intuition of time, and when to the contemporaneous cognition of space and time sensation supplies a third element, without which the two former are impossible, we reach the conception of motion. Hence we figure to ourselves the conceptions of succession, expansion, contraction, separation; which conceptions include the simultaneous cognition of space, time and motion. These three indissoluble elements thus form the mould in which all thought is cast. Nevertheless, before names can be given to supersensuous objects of thought, return must be made to the senses, and images must be drawn from the concrete, from the actual processes of nature. Thus to pure thought, to abstract ideas, two sets of images serve as the vehicle, or rather the body; first, those abstract images involved in our intuitions of space and time; second, those concrete images presented by the senses. In the genesis of mind these two sets of images are contemporaneous in origin; they are the two sides of the same images, and are mutually dependent, the one sensuous, the other intuitional. But from the sensuous side all nomenclature must necessarily be drawn. All words which give names to objects of intellectual conception, indicate primarily objects or processes which the senses take cognizance of, and they are capable of transference to the higher supersensuous plane only, because these concrete objects or processes are fitted to serve as images of the purely intellectual objects.

It is evident that the extension of meaning which words derive from this source must be distinguished from those

transferences, those metaphorical uses of words, which are based upon the identity of force, substance and their limitations, as well as from those based upon analogy or the identity of relations. Here are ideas which rise above the plane of the senses, with the objects of which they have, properly, no analogy. They are ideas, however, which do not stand alone, self-manifested; they cannot be thought apart from sensuous presentations, apart from concrete images of a more or less complex nature, which images are, therefore, their very body, but which, nevertheless, must be distinguished as images. Such images are properly termed symbols, and the extension of meaning which words receive in this quarter may be termed symbolical. Words that have been thus transmuted bear the same relation to the idéas they embody that art-forms bear to their contents.

To give a few examples. The word *right* means *straight; wrong* means *bent, crooked.* But the significance of these words does not stop here; the mind figures to itself the most fundamental distinction in morals by the contrast of straightness with crookedness, and thus immediately sees in these words—*right* and *wrong*—a higher significance than is naturally theirs. So, too, *upright* may carry to the mind something more than is written on the face of the word, since it symbolizes truth and firmness of moral character. *Legere*, as we have seen, obtains, metaphorically, the meaning of *to read;* but it takes a still higher flight, and becomes, symbolically, *to choose*, for what is choice, as the mind necessarily figures it, but the *picking out* of one thing from a number. So, too, the compound *intelligere* means *to perceive, to understand*, which is *to pick out* one thing from among others, to select the essential from the incidental. Not only the names of acts or processes, but also those of concrete things often obtain a like symbolical significance. Such words grow in meaning with the growth of man's insight. *Virtue*, primarily simple *manhood*, has already an abstract value from the figurative force imparted by the suffix; but when the moral sense rises to the perception that the highest quality of man does not lie simply in strength of limb and brute force,

but in a certain spiritual strength and devotedness, the word gains a new development, grows upward, so to speak, into a higher atmosphere. And so it is throughout the whole realm of words that express supersensuous notions; they all have their root in the soil, but are endowed with a constitutional vitality, by virtue of which they shoot upward into ethereal air and light, and blossom into a radiance of beauty that till then lay dormant in them.

The employment of certain sensuous images for the expression of certain supersensuous notions is not at all a matter of arbitrary choice. Those general conceptions which are the common heritage of man, into the recognized enjoyment of which he comes at the right moment of his intellectual progress, always find utterance in substantially the same set of images. There is here an *à priori* necessity governing the tendency of language, a necessity arising from that inseparability of thought from form, of which we have spoken. Behind the concrete image, or, rather, necessarily involved in it, there is the intuitional image, to which the idea must conform as to a mould. In the selection of intuitional images all choice is out of the question; the idea and the form are one. But in the associated concrete image there enters an element of variety, determined by external conditions and national characteristics. Yet even here there is found a uniformity, arising from the natural impulse of man to seize upon that concrete image which lies nearest to him, and is most universally familiar. The intuitional image involved in intellectual *comprehension* is that of a grouping in space about a common centre; the concrete image which this word presents is that of a *seizing together* by the hand. The use of the English word *grasp* to express the same conception—as in the phrase, "Do you grasp the idea"?—well illustrates that necessity which compels languages to designate the most general conceptions by substantially the same set of images.

In proportion as these conceptions are less general in their nature, a widening degree of diversity arises among the concrete images in which they are embodied—a diversity due to

varying modes of life, varying aspects of nature, peculiar historical experiences, the outbreak and spread of peculiar enthusiasms, in short, to all those circumstances and conditions that give to a people or an age its special characteristic. Hence the impossibility of arraying the idiom and poetry of one people in the dress of another. The peculiar imagery of a language gives to the lesser shades of thought their hue and shape, which are, therefore, not communicable by imagery of a different complexion, such as is found interwoven in the language of some other people.

Similar causes lead to even still greater diversity in the metaphorical use of words, for various peoples ascribe varying degrees of prominence to the attributes and uses of things, and associate effects with causes, and causes with effects, in various manners, and discover peculiar analogies in the processes of nature and the operations of man, the national characteristic being, in this diversity, the determining condition.

It is through these psychological conditions underlying the evolution of words, that it has become possible for the genius of language to elaborate a copious and complex vocabulary from the few root-words which etymological researches unearth. It may be deemed a fanciful speculation, yet it would not be unphilosophical to affirm that language is the outgrowth of a single word, from which, by various transferences to new uses, and its subsequent differentiation in these, its new uses, the earliest stock of vocables was derived. Language is a cosmos, which, by ever-increasing differentiations, has developed from the homogeneous to the heterogeneous, from the simple to the complex.

A few remarks in application of these distinctions to the English language. The Saxon element of our tongue is replete with words of metaphorical origin; it covers the whole field of sense with a more elaborate net-work of discriminating epithets than can be found in the body of any other speech. But it supplies comparatively few instances of the established use of certain words as vehicles of supersensuous ideas, and, in general, the few Saxon words possessing a fixed use of this nature have lost their

hold upon their original meaning as names for things of sense. For the expression of intellectual distinctions and perceptions we are, therefore, chiefly dependent upon compounds of Latin origin. But this very defect, if it be one, in the organization of the English language, is the great source of its strength and pliability. Words that are restricted in common usage to their natural meaning can be handled with all the more freedom in poetic speech; not having already received a fixed figurative sense—which often overrides and dims the natural one—they come fresh into the hands of the poet, with the odor of earth upon them, and moist with the dews of morning; they are still plastic and yield to the forming hand of genius, which moulds them anew for the figurative uses of the moment. When, however, a word of natural significance has been cast already in the die of higher thought by the creative genius of language itself, the poet of the age and the hour must accept it as it comes, ready-formed, from this poet of the ages; it may stand him in good stead in his temple of the beautiful, but he is powerless to carve upon it his own peculiar thought. The richer then a language is in words that smack of the soil, that retain their earlier use as names of natural things and relations, the richer the fund of poetic armory which it supplies, and the more vivid and vigorous it falls from the tongue of the impassioned speaker.

ART. III.—1. *Natural History of Hallucinations.* DE BOISMONT. London. 1850.

2. *Biographical History of Philosophy.* LEWIS. London.

3. *Northern Antiquities.* MALLET. London. 1847.

4. *Traditions of the New Zealanders.* SHORTLAND. Ed. 1870.

THE Effendi Kbaja in his day, though when that was historian saith not, was the wit and Douglass Jerrold of

Turkey. It is related of him in household stories that he was once asked what became of the old moon when the new one came in. The clever Mussulman was puzzled, and, no doubt, inserted his thumb in his mouth, with a grimace of profound meditation, after the manner of a modern philosopher pending the incubation of an idea. But puzzled as he was, and as anybody would have been previous to the publication of the Copernican system of astronomy, he answered, after some moments of deep abstraction quite befitting the gravity of the subject—"What becomes of it?—becomes of it!" rejoined the Effendi with an interrogation in his first, and an exclamation point (of wonder that so silly a question should be propounded), in his second repetition. "Becomes of it!" interjected the Effendi, removing his thumb very carefully, and smoothing his beard with the complacency of a Mussulman. "Allah is great! They break up the old moon and make stars of it."

In this *jeu d'esprit* from the Turkish, though of mythical date and referred to a rather mythical personage, the student of comparative philology and its adjuncts may find the origin of that more modern solution of the cosmical problem so often attributed to the precocious boy of the period, who avers in answer to the question of the origin of the stars, that the moon lays them. The variations sounded on this mythical witticism have, indeed, been almost numberless; and, in the jokers' column of the current newspaper, it has more than once made its *début* as something novel, quite in the original form in which the student laughs over it in his elementary Turkish reader.

Like souls in old legends, witticisms and proverbs are subject to a sort of transmigration; and it would be possible, no doubt, to trace the greater proportion of those supposedly modern bon-bons of wit and wisdom to an origin in the ancient "wrong end foremost," so often repeated of unpronounceable names, as translated from the Spanish, whence it can be traced to the Latin. So, too, the proverbial "Keep your jacket buttoned," which finds its equivalent in the Shakespearian "Mum's the word." "Supper without lights,"

for plenty without pleasure, appears in Spanish as *un ceno a oscuras*. The poetic couplet,

> "Though the mill of God grinds slowly,
> It grinds exceeding small,"

with all its innumerable variations, is world-old almost, although the Italians have substituted the devil for the deity in the English text. The proverbial adventurer of society, English and American, who is he but "Don Nobody's son," translated from the Spanish, in which the very definition of *hidalgo* (*hijo d'algo*) is the son of Don Somebody. Who is Mr. Parvenu, or Sir Stuck-up, or the great Veneer, but Don Elegantono, whose breeding is not equal to his elegance?

How often, too, in a proverb in one language the philologist finds the orgin of a word in another. Thus a whim in German is a grasshopper in Italian; its transmutation from natural history into the world of latent lunacies, coming through the proverbial "*Aver grilli in capo*,"—to have grasshoppers in one's head—by which the vivacious Neapolitan indicates a man of hobbies. Certain phrases, not proverbs in themselves, appear to have the vitality of proverbs implanted in their very constitution; and this is particularly true of all felicitous epigrammatic coinages. Thus "frozen music," as descriptive of a beautiful edifice, though no older than the days of Madame de Staël, has become a literary household word; and *ébroulement*, as indicative of the restlessness of the exotic few who are the poets and artists of the world, is quoted wherever criticism has penetrated.

The "music of the spheres" has come down through long ages, in the vortex in which Sapphic song has been lost—though with a perversion of meaning in its modern application. In its origin the phrase was peculiarly poetic. An ancient dream there was that angels guided the motions of the stars—a fancy to which Kepler, the great founder of celestial geometry, adhered to the day of his death, notwithstanding those wonderful discoveries that have handed down his name in equal honor with those of that trinity of astronomy, Newton, Copernicus, and Galileo. These angels, according to

the myth, accompanied their journeys with delicious music; and, hence, the phrase, "music of the spheres," as rendered by Milton in

"The morning stars sung together."

The Arab legend of Israfel, whose heart-strings were a lute;

"And who sung so wildly well
That e'en the stars were mute,"

and stopped on their journey to listen to music more beautiful than their own—is a reminiscence of the primitive fancy which Plato translated into Greek, but did not originate.

The cosmical theory, upon which the myth was founded, readily accounts for its universality among the ancients, and suffered little modification previous to the dissemination of the Copernican astronomy. According to the conception of antiquity the cosmos was a kind of three-story house. The flat earth floated on a vast substratum of waters, designated as the waters under the earth, beneath which was the land of graves, or Hades, to which Virgil makes descent by way of the Avernian wier. The land of graves, reproduced in modern poetry by Dante in the *Inferno*, constituted the first story of the cosmical edifice, or, more properly, its cellar, peopled with goblins, ghosts, shades, and other imaginary inhabitants of similar habits. Above the earth was suspended the firmament, a vast metallic plate or basin supporting another illimitable waste of waters like that upon which rested the earth. Upon this upper ocean floated the land of heaven, with its inhabitants of angels, governed by Deity and basking forever in the lucidity of his glory. Between was the region of air, peopled by Lucifer and his attendant evil spirits.

From the second story of this cosmical house humanity listened to the music of the spheres in an objective and literal sense, by no means expressed in the modern application of the phrase to the mathematical regularity of the celestial gamut. Descartes, in his famous theory of vortices, was the first to deny that stellar bodies were kept in motion by volitions, but it was reserved for Newton to relegate them to the dominion of law in the discovery of universal gravitation; whence dates

the ever-repeating tragedy of positive knowledge, in the puncturing, one after another, of many a beautiful myth with the stiletto of a fact. The Jupiter, Saturn and Mars of the Greeks have been dead for ages, and, phœnix-like, have sprung out of their ashes several very ordinary modern bodies, quite harmless, except in the possible accident of a collision. Luna—whence lunatic, because the moon was supposed to make mad, its shifting phases being supposed to modify madness—has been transformed into a very matter-of-fact, and by no means madness-inducing moon. Still, lunatic legends are not wholly wanting even now. There are yet those who attribute mysterious properties to moonshine. People enough there are who would never dare to fall asleep with the moon shining in their faces, lest they might wake up blind in the morning, and many a farmer still believes that vegetables planted in one phase of the moon run to tops or leaves, while, planted in the other, they are pretty sure to bear fruit quite extravagantly. Both myths are relics of the ancient, as is that of good luck or bad depending upon the shoulder over which the new moon is first seen—to which is traceable the vulgar idiom, "over the left." Very ancient, too, is the idea that moonshine must not be permitted to fall on the face of a sleeping infant, its beams inducing idiocy.

But to return. The very ancient cosmical conception, which the Greeks modified a little, affords the key, not only to the genesis of phrases like the "music of the spheres," but to the genesis of the strange mythology of the ancients, and of the stranger gnosticism that supplanted it in the general acceptance of the Platonic philosophy. Standing in the first story of the cosmical edifice, through rifts and crannies of skylight, man saw angels and had glimpses of the glory of gods—caught tremulous whiffs of music, and listened day and night, awake as well as in dreams, to the lyrics of seraphim. Fantastic clouds fashioned themselves, to his imagination, into wings of angels, into supernal faces, into wierd omens of good or evil, into golden cars hurried hither and thither by winged horses, in which rode gods.

Little more did Plato than to reduce this many-colored

garland of myths to something like rational order. And the æons of the Gnostics, what are they but the ideas of Plato, enveloped in atmospheres of visible glory, and resouled with a modicum of the Platonic world-soul? How like a romantic mythology reads the system of the great Greek master! Besides real men, horses and trees, an ideal man, horse or tree, was supposed to exist; and every particular man, horse and tree consisted of abstract existence, modelled after the ideal. Plato, for example, was abstract existence, with the addition of animality, humanity, and Platonicity. An ideal world of universals stood at the head of the real world of particulars, and God had created the world, according to Plato, by encumbering mere ideas with envelopes of visible matter, which, being more or less imperfect in its plasticity, represented the original idea with more or less imperfection. Beyond this, and at its very root, lay the unencumbered idea of ideas, representing a sort of world-soul and sum-total of all cosmical activities; while still beyond lay the region of the absolutely ideal God, whose fulness was expressed by Cato in the world-soul, and by the Gnostics in the gamut of æons.

Thus crawls philosophy out of myth, using the word to represent the unproved. Thus, too, science, both manifesting in all ages a singular tendency to resolve themselves into their legendary originals. For example, what is Mr. Murphy's "Formative Intelligence;" what Sir William Hamilton's "Unconditioned;" what Herbert Spencer's "Unknowable;" what Professor Huxley's "Molecular Activity," but the Gnostic *pleroma*, or the Platonic world-soul, or the Hindoo Brahman over again, with a different name? But if the name is more scientific, what is it but a verbal equivalent for the same fundamental conception and the same pantheism?

The difference is that, while philosophy emerges from ontological myths, science has its root in the gradual reclaiming of myths of natural history, metamorphosis, and transmutation. The Göthe of Latin poetry writes:

> "Linquitur, ut merito maternum nomen adepta
> Terra sit, et terra quoniam sunt cuncta creata;"

adding as a reason further for the epithet of Mother Earth:

> "Multaque nunc etiam existant animalia terris:"

thus enunciating the very first myth of physics, that living creatures spring out of the earth. Further on, the poet gives his *rationale* of this genesis of all living, adding that they (living creatures) are developed by rain-water and by warm vapors generated by the sun's heat. Old this primitive myth of science is as the Mosaic cosmogony. But old as it is, there is another of equal antiquity: that the corruption of one body is the generation of another. In accordance with the latter, a seed was supposed to die before the young plant sprang from it—an idea which St. Paul in his most fervid mood makes the basis of an illustration, in the eloquent passage: "Thou fool, that which thou sowest is not quickened, except it die."

An earlier allusion to it is contained in Samson's riddle of the generation of bees from the dead body of a lion, with which he puzzles his inveterate enemies:

> "Out of the eater came forth meat,
> And out of the strong came forth sweetness,"

which in the seventeenth century was quoted in opposition to Redi's conclusion from experiments, that all living things, to whatsoever order belonging, are propagated by germs.

To the ancient mind, the earth was a great mother teeming with living millions by spontaneous generation. An eternal transmigration of atoms was going on everywhere; atoms taking new forms and reappearing in new organisms by action of an ever-sleepless volition impelling them, and of a profound instinct implanted in their very constitution. Thus the atom represented a sort of eternity of living existence, passing by transmigration through an endless succession of organic bodies, and returning to its old state of a sentient monad, only to assist in the integration of new bodies. Men came and went, but the monad was forever.

Between this myth of the transmigration of living atoms and that other of the transmigration of souls runs a strange sort of analogical resemblance. But how were these atoms—these self-existent protoplasms—nucleated into organisms having hands, feet, heads—in a word, members? Here again, ancient

speculation had recourse to a myth; and every organism was fashioned by an interior æon, to which the volition of the monad was, for the time being, subject; and thus was built up out of living atoms, through the sleepless energy of the vital æon, an approximation to the ideal of the organism, or species to which the organism belonged. A man was a mass of living molecules governed by an æon, physically; mentally, a soul which might have belonged to some remote ancestor, but was, more likely, that of some inferior animal promoted to humanity for good behavior; for believers in the transmigration myth regarded natural history in its gradations as a series, in passing through which souls were developed into humanity, and, at last, into angelhood; and, if, having passed once through the series, they proved in humanity quite intractible, they were sent back to try it over.

It occasionally happened that an æon had a fancy for the nondescript, and would indulge its freak by putting the atoms in a somewhat nondescript form; and thus there came about a goblin world of griffins, dragons, pigmies, and other shapes belonging to no species, and, consequently, supposed to be the prisons of souls having committed some unpardonable enormity. The myth of the basilisk belongs to an order of fictions referable to the stem-idea of goblin-genesis. According to the old superstition, when a rooster was seven years old he would lay an egg, which, upon iucubation, would produce a creature, half-serpent and half orginal stock, termed a basilisk, and so poisonous as to kill any creature it looked at. The easiest way to kill it was to hold a mirror before it, when, by reflection of its own deadly look, it would—so ran the legend—drop dead of its own hideousness. Hoary as the hills, but still prevalent in some parts of the world, this superstition is traceable to a relationship with the Arabic myth of the evil eye—*Ain rab*—common in Eastern Asia, and carried hither and thither by that strange race of *juifs errants*, the gypsies.

Absurd as seem these myths of primitive man, they have, through the transmutation of ages, been invested with togas of scientific phrase—have had, in a word, a sort of transmigration into other bodies of expression; the living atom having

been translated into Greek by protoplasm; the soul itself into an eternally transmigrating molecular motion, which climbs and descends in the same endless succession of cycles.

The living-atom myth, which favors the basis of the protoplasmic hypothesis, suffered little modification previous to the dawn of modern histology, when Buffon reproduced it in his theory of organic molecules, according to which vitality was eternally vested in certain indestructible particles of matter, constituting the physical basis of all organic beings, and having certain properties and inalienable activities differentiating them from matter not living. Dead matter could not be transformed into living; and living matter, having vitality as an inherent activity, could not die. Progress takes a few steps; and, *presto*, the bodily part of Buffon's myth is defunct, the soul of it entering into the newer body of protoplasm or proteine, which passes from dead to living, and *vice versa*, with the utmost possible ease: the old æon reappearing in the law of modality determining that an acorn shall produce an oak, not a maple; while the poor soul of the ancient is metamorphosed into a molecular motion, now sinking into unconsciousness in the great tomb of inorganic matter, now rising into consciousness again in the molecular-material bubble, termed humanity. Thus man is converted into a sort of molecular thinking cap, very useful to matter as a self-register of its states and fluctuations.

But, by way of giving the botanical kingdom an opportunity to make itself useful in the world, in this new myth—begging the pardon of several learned professors—it has been converted into a manufactory of organic monads intended for the nutrition of the animal kingdom. Emerson may repeat as he likes—

> "For if the eye was made for seeing,
> Then beauty is its own excuse for being."

But beauty is simply protoplasm put up in very pretty and tempting packages, like bon-bons at a confectionery depot; and violets blossom in the grass for the very purpose of inducing animals to eat them, and the grass with them. To apply

the logic of Rocoles, who avers that the lion might as well have been called a monkey, it is obvious that the rose or lily might better have been a cabbage, since neither is anything more than protoplasm running to waste in the way of the beautiful. But, granting that the end of all beauty is to be cooked, eaten, and digested, what becomes of Gray's pleasant fiction of theology:

> "Full many a flower is born to blush unseen,
> And waste its sweetness on the desert air?"

Beauty has been beheaded for treason occasionally in centuries past; but now beauty is treason to the great purpose of vegetation, the production of palatable monads to be digested, assimilated, and made to minister to the molecular activity of thinking.

A single myth traceable to the old fiction of æons governing the nucleation of organic bodies, is still accepted in some quarters. Swedenborg taught that the spirit gave shape to the body, and that, if any member, as, for example, a leg, was lost, the perfect spiritual shape was still preserved; and, in confirmation of the idea, cases are instanced in which persons, having suffered the amputation of a limb, have been conscious of pain, in the toes, for instance, after the amputation had been performed. Swedenborg gave man two bodies —one, substantial and inner, which could not suffer mutilation; the other corporeal and exterior, constituting a sort of mortal coil which was shuffled off *in articulo mortis*. Hence, though the material body might be despoiled of a leg or an arm by Surgeon Sawbones, the invisible and substantial body was at the mercy of no instruments Sawbones could command.

The singular power of reproducing lost parts possessed by certain animals has been frequently quoted as triumphant proof, not only of the existence of the substantial body, but of its capacity, under certain conditions, of renewing amputated members. Cut off the legs, tail, jaws of a newt, separately or all together; and, as was long since proved by Spallanzani, the animal reproduces legs, tail, and jaws exactly in

the form of those cut off. Presto, the mutilated newt reappears as good a newt as before, with legs, tail, and jaws as exactly like those which have been cut off as if some mysterious artist had modelled them with the originals before him.

There is a myth still prevalent in some parts of New England, that serpents have the same power of redintegration. Cut a snake in two, and put the pieces any attainable distance apart; and, according to the superstition, the head, with part appertaining to it, will hunt up the lost remainder, readjust it properly, and lie still until the *vis medicatrix* has knitted the two together. Hence, in killing a snake, it is customary to make sure of so bruising the head as to put the contingency of redintegration quite out of the question. The age of this superstition is a problem of impossible solution. Possibly it is derived from the old promise—"The seed of the woman shall bruise the serpent's head." Possibly the old promise itself employs metaphorically the terms of a myth developed pending the Eden ages of primitive man.

The serpent has always had a mysterious satanic association with the preternatural, which is forcibly illustrated in the myth of the temptation; notably so in the myth attributing to it powers of fascination; but there is a New England myth of spontaneous generation concerning the hair-snake, which is worth noting. It is supposed that a hair from a horse's tail, being left in water for a few hours, is turned into a minute, thread-like serpent endowed with the power of propagating its kind; and this writhing, active little reptilian, supposedly thus generated, is termed the hair-snake.

The reader has now traced the gradual resolution, through almost unnumbered centuries, of a few primitive fictions into positive physical sciences. In like manner, the Greek fiction of an upper ether affords the basis of the undulatory hypothesis of light—itself a modern myth of rather imaginative cast.

Take another phase of the primeval pantheism of the world-soul; considering it from the poetic stand-point. To ancient man the conception of volition was practically un-

limited. A tree, a stone had something of the God in it. The music of the spheres was caught and repeated in the harmony of things earthly; and earth answered note for note to the melodies of the celestial. Man as poet bent his ear, heard, and reproduced the deep songs of the volitions that moved and breathes about him and above; and music was the one language in common between humanity and the hosts, unseen but not unheard, that encompassed it about.

It has been supposed that this ancient application of the word *music* to the waving of trees, the nodding of blossoms—in short, to all the ephemera of beauty—was not associated with the notion of sound. Again, as in the instance of the "music of the spheres," modern acumen is at fault. An old English writer apprehends the ancient conception more correctly in a quaint apothegm as to the origin of music: "The verie source, and, so to speake, springeheade of all musicke," remarks he, "is the verie pleasante sounde that the trees make when they growe." Mrs. Browning embalms the same fancy in verse of the quaintest deliciousness:

> "The divine impulsion cleaves
> In dim music to the leaves
> Dropt and lifted, dropt and lifted."

So, too, Poe, in a personification under the name of Ligeia:

> "Ligeia, Ligeia,
> My beautiful one!
> Whose harshest idea
> Will to melody run!
> Say, is it thy will
> On the breezes to top,
> Or, capriciously still
> Like the lone albatross,
> Incumbent on night,
> As she on the air,
> To direct with delight
> All the harmony there?"

But are not these operations of nature really soundless? Soundless! Not so, except from the dulness of human hearing. The strange, oppressive stillness of the tropical forest at noonday, intimates a learned professor, is due only to the

stolidness of human ears, and could the murmur of its living maelstroms, as they whirl and circle in the numberless myriads of cells which constitute every separate tree and plant be caught, human ears would be stunned as by the roar of a great city. So here is a myth which, having come down through ages, finds at last a scientific basis in the fact that all protoplasmic bodies, like the stinging-hair of the common nettle, are, however minute, bodies with an ever restless internal circulation; and since it has been proved that color, like sound, consists of undulating waves, so that it is possible to set the spectrum of the one to the gamut of the other, may not human ears become sensitive enough by and by to hear color as well as see it? May not the minute wave-motions that condition the forms of plants and the undulations of its odor-waves become audible by-and-by, so that a blossom shall appeal to the ear as a delicious blending of the melodies of color, of form, and of odor? Sir Francis Bacon intimates that he had a certain perception of music blended with the sensation of odor, and never entered a room pervaded with the latter without fancying himself walking through waves of melody; and why may not anybody else scent music in a lily or a rose, and even discriminate between the tunes which different blossoms play in the exhalation of perfumes. Herbert Spencer has proved that all activities whatsoever fall naturally into waves of rhythm; and thus the cosmos was a poet long before man thought of rhyming.

After the promulgation of the Copernican system of astronomy, which was printed at Nuremberg in 1543, a period of two centuries elapses, in which observation takes the place of myth-fabrication. A renaissance of the mythical spirit occurs about the middle of the eighteenth century, and Kant anticipates the nebular hypothesis—La Place's splendid myth—in the bold and startling speculations of his *Theorie des Himmels*, which the latter reproduces in many respects in his *Système du Monde*. Newton's magnificent discoveries are already public property. So Galileo's; so Kepler's. Copernicus's have been struggling for mastery over the old cosmical myth with which primitive man set out, for over two centuries

Galileo, Newton, Kepler and Brahe have one after another picked up the hammer of Thor and hammered away at the myth of ages, which has at last been beaten to powder.

The world must have a new cosmogony adapted to Newtonian principles. Presto, from the heads of two men —one a dreamer of Sweden and the other a philosopher of Germany—spring two Minervas of cosmogony. Kant says, "Give me matter and I will build the world." Beginning with a formless waste of nebulous blastema, he supposes a single centre of attraction, which develops a prodigious central body, encompassed about with systems of planetary worlds—a world-maelstrom whirling in the midst of still unreclaimed masses of vapor and molecular waste. Millions on millions of ages the great maelstrom expands its margins, converting blastema into cosmos, but losing at the centre what it gains at the margin: the attractions of the central systems bringing their constituents together again in a continuous crash of matter and wreck of worlds. Thus the worlds that are now circle in a prodigious ring of cosmos between the wreck of the central worlds that have been and the molecular waste of the worlds to be hereafter. Like La Place, Kant accounts for all the then discovered phenomena of astronomy, even to the zodiacal light.

Thus, in 1755, the principle of gravitation has resulted, in the hands of Immanuel Kant, in a splendid myth of cosmogony, more daring in its way, more tremenduous in its cycles of creation and destruction than any of which Greek, Hindoo, Goth or Egyptian ever dreamed; equally mythical, too, because equally vague and speculative in its magnificent mazes of guess-work.

Contemporary with the German thinker, the Swedish dreamer Swedenborg, also an Emmanuel, fabricates a strange, Gothic cosmogony. In this second myth the cosmos is the body of God, and hence a vast anthropomorphic universe. God's body being shaped like a man's, the universe is consequently a vast man-shaped body, every atom of which is a solar system. In a word, the universe is God's body, which is seen by the angels in heaven, as having the sun for its right

eye and the moon for its left. Not far from contemporaneous with both was Dr. Whiston's myth relative to the function of comets, in which those eccentric bodies are given over to the habitation of lost souls. Kant's myth, in the slightly modified form of La Place's nebular hypothesis, has represented the prevalent opinion of astronomers for over a century; but how soon the progress of physical discovery may render its abrogation necessary, and let it drop into the great waste-basket of the past, it would be the height of temerity to attempt to predict.

The two middle decades of the last century seem to have been given over to myth-building. The illustrious physiologists Harvey and Francisco Redi were busy with the demolition of the myth of spontaneous generation. Equally busy were Benoit de Maillet, the author of *Telliamed*, and Lamarck, the author of the *Philosophie Zoologique*, in the construction of the new myth of the transmutation of species, out of which has since been developed the compact system of Darwin, and a new myth in Professor Kölliker's odd fiction of heterogeneous generation. Cuvier was just then in the zenith of his fame as a comparative anatomist, and Buffon was cogitating his myth of organic molecules, which Professor Huxley has since metamorphosed into the protoplasmic theory of organic genesis.

According to Lamarck—of the two the abler exponent of the new myth—all species of animals result from the indirect action of alterations of circumstances on the primitive germs which he regards as having originated by spontaneous generation in the waters of the globe; thus travestying the primitive myth embalmed in hexameters by the Latin poet. Lamarck rested his myth upon the substratum of a reasoning like this. Organs are increased, he says, by action, atrophied by inaction. Hence, alterations of circumstance produce organic alteration by increasing the activity of some organs, and lessening that of others; and organic alterations are transmissible as hereditary properties. Of the struggle for existence so strongly insisted upon by Darwin, Lamarck had no idea. Nor had de Maillet, nor Robinet, whose speculations are crude in com-

parison with de Maillet's—cruder still in comparison with the *Philosophie Zoologique*. Man was a baboon modified by alterations of circumstances. So on and so on ran the myth, ending at last in primitive germs far down the million-columned vista of geologic centuries.

Dead myths lie all along the track of the Hercules of physical discovery; and at last discovery kills—strangles and casts into the waste-box—the long prevalent doctrines of progressive modification, through ages, from more to less embryonic forms. Myth more generally accepted, with the exception of Kant's *Theorie des Himmels*, has not been propounded since the days of the universally accepted fictions of humanity primitive. But an impartial survey of the positively ascertained facts of palæontology negatives these doctrines irrevocably. So witnesses Professor Huxley in his "Persistent Types of Life."

Of those dead, one of the strangest and most fantastic was the myth of the phlogiston supposed to inhabit metals. Just as really mythical it was as were the more ancient fictions of the dryads, fauns and other weird volitions moving the cogs and pulleys of all natural phenomena. The metal-spirit has long since ceased to exist, having been superseded by more scientific forms of personification.

Yet the myth of the phlogiston occasioned the discovery of oxygen. Previous to the experiments of Eck de Sulzback, it had been held that metals were inhabited by a sort of spirit which, being set free by heat, made them lighter when cooled, by re-entering their bodies, which were heavier when heated, owing to the exhalation of the inhabiting spiritual phlogiston. Sulzback murdered this myth by proving that the augmentation in the weight of metals subjected to heat, was not occasioned by an escaping spirit; but that the fixed ashes, as he termed the oxides, were formed by the union of a spirit with the body of the metal. This was Sulzback's philosophy of oxidation; and he went on to say that artificial cinnabar—his term for the red oxide of mercury—released this spirit when heated, and that, the spirit having a certain weight, the cinnabar became lighter in consequence. Doubtless, the now antiquated

experimenter's idea that spirit had weight, was, at that day, denounced and deprecated as heterodox; for it had been held for ages that spirit possessed a certain tendency to ascend which lessened the dead gravity of matter with which it was connected. Thus, when the phlogiston left the metal, the metal became heavier, having lost the buoyancy occasioned by its spiritual presence. In like manner, and for the same reason, a dead body was regarded as heavier than a living, that is, a corpse was thought to weigh more than its person had weighed as a living organism—to which myth is no doubt referable the origin of the phrase, "dead weight." Sulzback's investigations impugned this once popular and, in some quarters, still believed superstition; and were, hence, in their day, as heterodox as Francisco Redis in his. Had Sulzback called this spirit oxygen, the elimination of the myth would have been completed. But for more than a century combustion was supposed to be fed by an attendant spirit. In 1501, Cardoni speaks of the spirit that feeds the fire; but, in 1602, the world has come to the conclusion that the drop that covers the surface of heated lead is of atmospheric origin and, just as the sun of the seventeenth century was shooting red rays up the east, Jean Rey proved by experiment that contact with the air was a condition of oxidation. At last, in 1774, Priestley enacted the old experiment of burning out the spirit from cinnabar; which Sulzback had enacted 300 years before him. But Sulzback called it a spirit, and made no attempt to imprison it as a consequence; while Priestley caught it in a pneumatic trough, and named it oxygen; and thus Cardoni's spirit that fed the fire was identical with the gas that supports combustion. Thus, too, the medieval myth of phlogiston was transmuted into the scientific fact of oxygen.

The present century has produced a few myths worthy of mention. In the infancy of photography was developed the fiction that the likeness of the murderer might always be found photographed in the eye of his victim. Several novels introduced the idea by way of bringing the hypothetical murderer to the hypothetical justice of the novelist; and, notwithstanding the idea could only have originated with some person

wholly uninformed as to the complexity of conditions necessary to produce a photograph, it took possession of the public mind so completely that, at a recent coroner's inquest in this city, a scientific expert was asked by the coroner to make oath that, at the *post-mortem* examination, no image could be detected in the eye of the victim!

The myth was equally prevalent in England; and it is not three years since English journals of first standing gravely printed the marvel that, a photograph of the eye of a murdered person having been taken, the image of the murderer was visible, under a powerful microscope in the eyes of the photograph. The fact was extensively quoted as proof of the myth; but again the tragedy of strangling a beautiful myth with the noose of a fact, was enacted; and it was proved that, in taking a photograph, the image of the photographer is always reflected in the eye of the subject; that this image may be photographed, and, under favorable circumstances, might become visible under the glass; again, that, in a living person, owing to the convexity of the cornea, the image must be exceedingly small, but that, in the flattened cornea of the eye of a dead person, it must necessarily be considerably larger. Yet again, it has been proved by observation that irregular reflections occasionally appear in the partially collapsed cornea of a corpse; and it might well happen that, in some instances, they have resembled a man quite by accident. A superstition, very natural, under the circumstances, would identify this vaguely anthropomorphic reflection with the person of the supposed murderer.

Very recently the marvel went the round of the papers, that a tragedy had been photographed on a pane of glass; and the fact that the spy-glasses of the surveyor very frequently present simulations of leaves and twigs apparently on the object-glass, was quoted as evidence of the probability of the new marvel. In the instance of the spy-glass the explanation is very simple. The object-glass of the instrument consists of two glasses—one flint and the other crown—cemented together with Canada balsam. When the glasses get loose, as they often will, they separate a little, and the air penetrates the

balsam in all directions, causing an appearance of leaves, twigs, or other fanciful forms between the glasses. Opera-glasses are more liable than field-glasses to exhibit these leaf-like *simulacra;* and the remedy is to take them to pieces, clean the glasses, and insert a new layer of balsam. Thus, the proof failing, the myth went to the wall, and was pinned there with the bare bodkin of a keen-pointed fact.

In some parts of New England, a myth somewhat similar to that of the Arab ghoul, the German Elfe-maid, and the Hungarian vampire, has been developed in the prevalence of tuberculosis or quick consumption, by which whole families are often taken off, member after member, in singularly regular succession. The myth is that the heart of the consumptive lives on after burial, feeding by some strange *metempsycose* upon the vitality of a living brother or sister, who begins to waste next; and instances have occurred in which bodies have been exhumed and the hearts burned, by way of saving the living from the voracity of the dead. In certain portions of New England, also, the fiction that cats are in some sense goblins still prevails; and there are New England women who would shrink superstitiously from the experiment of leaving grimalkin alone with the baby.

The first of these myths is distinctively of New England origin, though its analogy to the Arab, German, and Hungarian, has occasioned its reference to a primitive stem. The ghoul of the Arab—which Moore in *Lalla Rookh* spells *ghole*, and whence some philologists draw the English *owl*—is a demon in the form of a woman, feeding upon the dead and inhabiting cemeteries, ruins, and desert places. The ghoul is the scavenger of Azrael, and the spirit of desolation, rottenness and decay—the buzzard and jackal of pandemonium,—but is never fabled as assuming other than woman's shape.

The vampire—ghastly and terrible as is the conception—bears as little relation to the New England legend. The Elfe-maid inhabits woodlands in the form of a beautiful woman offering the wayfarer a cup of wine, the drinking of which makes mad. A German ballad thus photographs the temptress:

"She sits 'neath a linden singing, singing,
Though her dropped lids nothing say;
But her beauty lures whether smiling or singing,
For she is an Elle-maid gay."

According to the superstition, she is a mask, not a spirit—one of those nondescript Germanesque goblins with which Teutonic household stories so plentifully abound. Nor can any genitic relation be traced between the German Elfe-maid and the Arab ghoul, which in Hebrew appears as the *lilith*, or the Hungarian vampire and the New England quick consumption. They are quite distinct superstitions, having a quite distinct genesis.

A single primitive myth of vampirism remains to be noted, as affording the solution of the ancient custom of strangling the second-born of twins. Even in the primitive story of Jacob and Esau, and the hatred of the latter for his brother, a hint of the primitive superstition is embodied, which demonstrates its great antiquity and accounts for its universality in some form or other. It was held by the ancients that the second of the two was a sort of vampire creation, feeding subtly upon the substance of the other. Hence, the destruction of the former, an attempt to circumvent which by the mother was visited with the death penalty. To this myth, perhaps, is traceable the New England superstition which invests quick consumption with a sort of atmosphere of the preternatural.

And in ultimate analysis, what are all these myths of ghoul, vampire and kaksdæmon but so many equivalents for the given theory of diseases—so many dim prefigurations of a dawning scientific hypothesis? The fact that almost every important hypothesis of modern science has its origin in primitive myth, has been established. It remains now to submit that fact in the form of a generalization—to express it in the terms of a law. What then is the principle—the law—that governs and controls this gradual transition, from age to age, of certain fundamental conceptions, religious and scientific, from the myth-form to that of positive knowledge? This, doubtless: that the germs of all fundamental truths are im-

planted in the instincts, and gradually grow their way into rational definition, as culture advances, blossoming as myths first, and finally bringing forth fruit as rational conceptions susceptible of rational explanation.

ART. IV.—1. *Raphael of Urbino and his Father, Giovanni Santi.* By J. D. PASSAVANT. London. 1872.

2. *Histoire de la vie et des Ouvrages de Raphael.* Par QUATREMÈRE DE QUINCY. Paris. 1835.

AT least three of the great Italian artists have found earnest, able and painstaking biographers to chronicle their respective lives and works. Without forgetting to pay due tribute of respect to Vasari, Condivi, and other of their contemporaries, for their choice legacies of primitive facts and anecdotes, it must still be allowed that the present century of writers have done more to unveil mysteries and to reconcile adverse historical data than those of the three preceding centuries put together. The remarkable career of Michael Angelo has been explored even to its smallest details, and learnedly written out by Dr. Hermann Grimm. The clouds of light and shadow which hung over the days of that most scientific of artist-natures have been rent at last, and thoroughly robbed of their fact and fancy by an eminent French critic, M. Arsène Houssaye. And now, finally, after the combined efforts of many preceding writers, Herr Passavant, director of the Frankfort museum, has performed his labor of love for the "divine" Raphael; he has brought to light so many new facts, documents, letters, etc., and, indeed, has gone over the field with so much care, so much thoroughness, and so large an expenditure of time and money that it is almost impossible to conceive of anything new being discovered bearing in any way upon the subject.

The subject of the present article is Raphael of Urbino;

and it shall be the aim of the writer to gather up such new facts and items of information as have been presented by his latest biographers. It would be impossible, of course, to offer within the present limits anything like a biography of the artist; but in these days, when people's minds, diligent and attentive in other respects, are too apt to lose sight of those distinguished predecessors, whose wealth of genius and of talent has contributed largely to the enjoyment and necessary wants of all succeeding ages, it cannot prove amiss to recall some of the more important events in the life of Raphael, one artist among the many, whose immortal works the world never tires of praising, whose short but striking existence marks a golden age in the modern period.

It was in the small town of Urbino, on the morning of the 6th of April, 1483, that Magia, wife of Giovanni Santi, presented her husband with a son, who was destined to be the greatest ornament of the arts. The father, who, it seems, had had a presentiment of the position the child was to attain, baptized him Raphael, a name which had no precedent in the family, and Vasari relates that he would not allow the child to have a wet nurse, as he wished the mother herself to nurse him. Of the early years of Raphael nothing at all is known, except that after the death of his father, in 1494, he was entrusted to the care of Bernardina, his stepmother, his own mother having died in 1491, and of the priest, Don Bartolomeo, his guardian.

Pietro Vannucci, commonly called Peruquio, was then at the height of his glory, acquired principally by the works executed at this time. It was his good fortune to be chosen as the guide of the child Raphael, who, as Herr Passavant remarks, "was destined to catch the inspiration of his master, transform it, and raise it to a height that the master himself had never dreamt of." It was probably in 1495 that Raphael went to study under Peruquio, although no real date is assigned. If, at the outset, Peruquio, astonished at the precocious talent manifested by Raphael in drawing, charmed with the amiable temper, the deportment and the grace of his pupil, predicted that he would soon become his master, the young man, on his

part, imitated Peruquio as assiduously as though he were never to be other than his disciple. At any rate, such was the wonderful progress of the young pupil that his master early began to employ him on his own works. There may still be seen in the Vatican a "Resurrection of Christ," which was the result of the joint labors of Raphael and his master; and it is not improbable that the former performed the larger part of the work. During this period the industry of Raphael was remarkable. The artistic spirit seemed to flow from him, so to speak, in forms of radiant beauty. He never allowed his hand to remain idle. Always thinking and always planning, unlike the great Leonardo, he managed to execute all his thoughts and to fulfil all his plans. In the space of a few brief years, we read of his painting a longer list of works than many other artists could finish in a lifetime. Not to mention any of them, it may only be said that all bear the impress of the school of Peruquio, with an additional amount of spiritual sentiment, a more delicate observation of nature, and a slight tinge of his own individuality, which was already beginning to be visible.

It is embarrassing enough for the historian of art, when, instead of facts to relate, he has only works to describe, and this without being able to convey to the reader those delicate resemblances and distinctions which the eye alone can apreciate. The history of Raphael, indeed, could alone be done thorough justice to, in the sight and presence of his works, but this obviously may not be. The dispersion of his productions, which prevents it, places the writer, moreover, under this double disadvantage, that he himself can scarcely form a proper comparison among them, or draw the necessary results, and that he is compelled to appeal entirely to the memory of his reader.

After leaving the studio of Peruquio, in 1504, Raphael painted the "Marriage of the Virgin," known under the name of the *Sposalizio*, now in the Brera at Milan, and a small half-length "St. Sebastian," now in Bergamo. But, at this time, political strife was harrassing the peace and strength of the Italian people. The Prince Guidubaldo had just returned to his state

after having incurred many hardships and dangers. "After the twenty-six days of the government of Pius III.," relates the biographer, whom we have already quoted, "and when Guiliano della Rovere was pope, under the name of Julius II., Guidubaldo was summoned to Rome, and created Gonfalonier di Santa-Chiesa. But it was stipulated at the same time, that Francesco Maria della Rovere, nephew of the pope and of the duke, should be recognized heir to the Duchy of Urbino. This solemn inauguration of the Prince della Rovere, and the presentation to Guidubaldo of the general's bâton, in presence of a large number of nobles, took place in the cathedral of Urbino, in 1504, at the very time when Raphael had just placed his altar-piece at Citta 'di Castello."

Raphael, sensible to the elevation of his prince, painted several small pictures for him, one of which, "Christ in the Garden of Gethsemane," Vasari describes as being "of such finish that a miniature could not surpass it." The "St. George," and the "St. Michael" in the Louvre, belong to this period. The latter, especially the subjects in the background, vividly recall different scenes from Dante's *Inferno;* for example, the description of the town of Dis (canto viii.), the allusions to the masked hypocrites (canto xxiii.) and to serpent-tortured criminals (canto iv.)

In the autumn of 1804, Raphael made his first journey to Florence. The fame of Leonardo da Vinci had partially drawn him thither. That artist had just completed his "La Gioconda," the cartoon of the "Holy Family," and was still at work on the "Battle of Aughiari." We are induced to believe that Herr Passavant is slightly in error on this point. Vasari, we admit, states that "the desire to see the celebrated cartoons, then so generally lauded, of Leonardo da Vinci and Michael Angelo" attracted Raphael to Florence. Herr Passavant, without giving the matter a moment's consideration, is led on to the statement that the desire to see the work was the motive of Raphael's visit; and that it was completed before the latter's arrival. Now, Leonardo could not possibly have finished his work before the year 1505, as his biographer has satisfactorily proven; while that of Michael Angelo was pro-

longed a year later. A letter of the time, written by the Duchess of Sora, says that Raphael "has decided to pass some time at Florence, in order to improve himself in his studies." In a word, we do not believe that a desire of seeing the cartoon of Leonardo was, in any way, the motive of the artist's visit.

The arrival of Raphael in the beautiful city of Florence unfolded a new and more resplendent life to him. The sight of the masterpiece of the ancient Florentine school, and especially an intimacy with artists, whose emulation had been excited by the example of Leonardo da Vinci and Michael Angelo; in fact, everything, contributed to develop his talent. The artist was received with much favor. Several distinguished patricians ordered pictures of him, and, under the happiest of auspicies, he began to feel at home.

The masters whom he principally studied were Masaccio and Leonardo da Vinci. These two artists revealed to Raphael his own wonderful powers, until then almost concealed. Awakened suddenly, and excited with the inspiration that seemed all at once to flow in on him from every side, he pushed forward at once toward the perfection he was soon to attain. Still Raphael did not wholly abandon the style of Peruquio. It was, of course, impossible for him to give up on a sudden all that he had learned and acquired from the impressive teachings of a most powerful and attractive master. "When Raphael," relates Vasari, "saw the works of Da Vinci, he was perfectly astonished. This style pleased him better than any other; he studied it, and left by degrees, and not without difficulty, the style of Peruquio."

Among the earliest works of Raphael, at Florence, were the "Madonna del Gran Duca," in short one of his masterpieces; another Madonna, which has recently been purchased for the Berlin Museum; together with several portraits mostly of members of noble families. Raphael's sojourn at Florence was brief, but accompanied by every pleasure that his heart could have wished. Of friends, he found many, whose encouragement and tokens of approbation incited his ambition and nourished his zeal. "When assembled together

with his friends before the works of the great masters, especially of Leonardo da Vinci, Raphael was expressing eloquently his feelings and thoughts. These artistic discussions were constantly resumed, with the greatest animation, in hours of relaxation, in the studio of the architect and sculptor in wood, Baccio d'Aquolo." It would be a pleasure to linger over these happy scenes, scenes which are only too vividly imagined by one familiar with the old localities and thoroughly imbued with the true, artistic spirit of the age. These years of the artist's life were some of his happiest. He was young, buoyant, full of ambition, and susceptible of the tenderest emotions. He knew no care, he recognized no foes, he wrestled with no perplexities. It was the glorious sun-tide of his career, during which he dreamt but the brightest visions.*

We have now to allude to Raphael's visit at Bologna, which many of his biographers have utterly failed to notice. For what purpose he went thither we know not, neither have we any means of knowing. Herr Passavant suggests that it might have been at the suggestion of Giovanni Bentivoglio, lord of that town. At any rate, there exists a letter which Raphael wrote in 1508, to Francia, the famous painter of Bologna; and the same letter speaks of the friendship which existed between the two artists. We see by it that they had promised each to paint his own portrait and to exchange them in memory of the happy days they had passed together. These engagements were faithfully performed, as is proven by another letter.

It was after his stay at Bologna that Raphael went to pay a visit to his native town. With respect to learning and morals, the court of Urbino was accounted the first of the smaller courts in Italy. Count Castiglioni has left a lively and agreeable picture of it in his "Libro del Cortigiano." Amongst

* "Tels furent aussi," says Quatremère de Quincy, "l'ascendant de sa supériorité, et le charme de son caractere moral, qu'ils lui créèrent sur tout ce qui l'environnait une sorte d'empire, sous lequel on se trouvait à la fois heureux et fier de vivre. Ceux qui auraient pu prétendre à devenir ses rivaux tiraient vanité de n'être que ses disciples, et tous étaient ses amis.

the great men then assembled at Urbino were Guiliano de' Medici, brother of Leo X., Andrea Doria, whose name is everywhere celebrated, Ottaviano Fregoso, afterward Duke of Genoa, and others. The brilliancy of such a court must have had great influence on the young and impressionable Raphael. The life of the "higher classes" appeared to him to be in singular contrast to that simplicity which he had hitherto known. He made acquaintance with some of the noblest and most learned men of the time, and even contracted a friendship, which lasted his whole life, with Pietro Bembo and Castiglione. In order to show clearly the taste, the spirit and the manner of the circle that surrounded Raphael during this period of his youth, his latest biographer has happily transcribed from Castiglione's "Courtier's Book" the conversation of one evening, which goes far to show that the artist, like other great men of his age, was most thoroughly imbued with the notions and ideas of Plato. Platonism was, indeed, the doctrinal faith of very many of the famous Italian painters.

It is unnecessary to mention the several works which Raphael painted during his stay at Urbino. At the most, such a mention would be but a bare catalogue, and would not, in that event, help the reader to get a clearer insight into the artist's life. We must, therefore, content ourselves with facts only. On the 25th September, 1506, Julius II., accompanied by twenty-two cardinals and a number of prelates, arrived at Urbino. Twenty-five of the noblest young men went forth to meet him. In the evening he advanced on horseback to the cathedral, and from thence to the court. Did Julius II. have the pleasure of seeing one of Raphael's paintings at that court? We are fain to believe that he had. However, all that we know about it is this: Raphael returned to Florence, painted the "Holy Family" of pyramidal fame, the "Entombment," the charming "Saint Catherine of Alexandria," several madonnas, that precious jewel of the Louvre, the "Belle Jardinière," and many other pictures beside, and then suddenly and mysteriously quitted Florence to enter the service of the pontiff. But how came he to do so? Had the young duke given him a recommendation, or

had he himself suggested his own artistic worthiness to the pope? Not until the archives of the Medici family shall have been freely opened to the public may we hope for a solution of the secret; and, perhaps, even then it may not be explained.

It was in the summer of 1508 that Raphael found himself at Rome for the first time. He found the pontiff seeking glory not only in politics, but also in the fine arts. The greatest of architects and sculptors, Bramante and Michael Angelo, were already engaged in executing his projects. He now required a great painter, and had the good fortune to summon Raphael; and the summons was as quickly followed by a response.

The whole world knows what sort of a man was Julius II.—a great sovereign, an illustrious general, a peace-restorer, an elevator of public morality, an honor to the arts, a patron of artists. Always meditating grand schemes and planning magnificent enterprises, he was, unfortunately, not permitted to see them completed; but he impressed on them all, by the assistance of the talents which he had recognized and chosen, the stamp of his own governing mind. But what was it that he now required of Raphael?

It is said that Julius II. refused to take possession of the apartments which Alexander VI. had inhabited. "Even if the portraits on the walls were effaced," said he, "the walls themselves would remind me of that Simoniac, that Jew." He, therefore, chose the apartments in the upper story of the Vatican, and commissioned Raphael to complete the decorations which had there been begun by Pietro della Francisca, Bramantino da Milano, Luca Signorelli, and others.

Raphael was commissioned to complete these decorations by painting the walls of the "Stanza della Signatura." In the magnificent palace of the sovereign pontiff Raphael's ideas expanded; his mind rose above the subjects of pagan mythology, which his predecessors had brooded over; he naturally, and consistently with the views of the time, chose to produce a composition which should represent the different religious and philosophic views of his generation. Hence, the

"Stanza della Signatura" might be termed the Hall of the Faculties, for by theology, philosophy, poetry and jurisprudence, Raphael has represented all the sciences which enable man to approach the divine truth. Herr Passavant very aptly remarks: "If it be considered that these paintings were intended to decorate the place in which the head of the catholic church was to sign orders regulating the government of the christian flock over the whole world, we must admire the wisdom of this device."

We regret to have to defer all descriptions of these grand works, since in them we find many secrets of the mind of the artist himself—we catch the train of his sublime thought, we note the germs of later conceptions sprouting up and growing. The most satisfactory details regarding the paintings *Della Signatura* are given in the works mentioned at the beginning of this article, and especially in the volume of Passavant. The originals are so well known through the medium of photographs and engravings that the curious reader need plead no cause for ignorance.

It was in the school of Athens that Raphael showed the full powers of his genius, and that he was completely master both of his style and of his execution. The traditional symmetry of the painters of Siena and Florence, in the fourteenth century, which Peruquio always observed, is also to be found in the school of Athens; but it is employed in a higher manner in the disposition of groups, so that the eye is not even arrested by these profound combinations, but may uninterruptedly enjoy the beauty of the lines. It has been alleged by many historians that the works of Michael Angelo served to reveal this "elevated" style to Raphael. Vasari was the first to offer such a supposition; and later writers took it up and bore it along, without pausing to weigh its substance. We prefer to entertain an opposite opinion, or, at least, an opinion restricted to certain conditions. It was Leonardo da Vinci and Fra Bartolomeo who impelled, by their mighty influence, Raphael onward to a brilliant future, and emboldened him to unfold his genius; while, on the contrary, the influence of Michael Angelo arrested this onward flight for a

moment. "Ancient art," says a writer, "had far more influence on Raphael than the style of Michael Angelo. All his sympathies urged him in that direction, which was, besides, the general tendency of the period; and the studies from the antique, which he was obliged to make for the 'School of Athens,' contributed much to make him appreciate the beauties of Greek art.'"

Condivi, one of the Italian biographers of Michael Angelo, states that "when that artist had completed one-half of the ceiling of the Sistine chapel, Bramante, at the instigation of Raphael, endeavored to persuade the pope to have the remaining half finished by Raphael." A letter of the Roman artist also says: "The jealousy of Bramante and Raphael da Urbino was the cause of all the misunderstandings between the pope and myself. This jealousy, and the intention they had to ruin me, prevented the mausoleum of Julius II. from being finished during his life. It must be confessed that Raphael had good reasons for this, for whatever he knew of art he had learned from me."

Here is a puzzle, which might be assumed as a topic for many pages of discussion. Briefly, how may we account for some discrepancies? That Michael Angelo was irritable, subject to ill-feelings, and pettish in his disposition, is a known fact. Not only his letter, from which we have just quoted, but his whole life proves it. Such faults, if faults they were, must, however, be lightly considered. Michael Angelo bore about the same relations to his contemporaries as did Beethoven to his. Each was surrounded by jealous, intriguing and injudicious "friends." Nowadays, we should term such friends "enemies." A week of dark clouds and rain is apt to sour anybody's disposition. How was it possible for the artist and the musician to be other, or to appear other, than they were, embittered as were the many years of their several lives by sorrowful and dire perplexities!

Passavant, of course, is disposed to set Raphael right at the expense of Michael Angelo, and to praise the former and condemn the latter. Inasmuch as he has failed utterly to carry his point by just arguments, we shall not attempt to do

so for him. The ill-feeling between the two artists, if indeed it was *really* an ill-feeling, must be explained by the faults of the time, and be referred to the disposition of Michael Angelo —a disposition not born in the man, but formed by external and objective causes.

The inexhaustible genius of Raphael gave birth to innumerable masterworks, during his three years' stay in Rome, the mere enumeration of which appears formidable. Every day found him busily at work, painting not only for his sovereign patron but for others as well. Cinelli, in his "Bellezze di Firenze" (edit. 1677, p. 277), mentions the following anecdote: "Raphael of Urbino had painted for Agostino Chigi, at Santa Maria della Pace, some prophets and sibyls, on which he had received an advance of 500 scudi. One day he demanded of Agostino's cashier the remainder of the sum at which he estimated his work. The cashier being astonished at the demand, and thinking that the sum already paid was sufficient, did not reply. 'Cause the work to be estimated by a judge of painting,' replied Raphael, 'and you will see how moderate my demand is.' Guilio Borghesi, the cashier, thought of Michael Angelo for this valuation, and begged him to go to the church and estimate the figures of Raphael. Possibly he imagined that self-love, rivalry and jealousy would lead the Florentine to lower the price of the pictures. Michael Angelo went, accompanied by the cashier, to Santa Maria della Pace, and as he was contemplating the fresco without uttering a word, Borghesi questioned him. 'That head,' replied Michael Angelo, pointing to one of the sibyls, 'that head is worth a hundred scudi! and the others are not worth less!' Some who witnessed this scene related it to Chigi. He heard every particular, and ordering in addition to the five hundred scudi for five heads, a hundred scudi to be paid for each of the others, he said to his cashier: 'Go and give that to Raphael in payment for his heads, and behave very politely to him so that he may be satisfied; for if he insists on my paying also for the drapery, we should probably be ruined.'"

Of all the illustrious men of his time, Raphael has been

most fortunate in his biographers. We have already spoken in general terms of the excellent work of Passavant. As a whole it is superior to any other. Indeed, there is scarcely anything which has the slightest bearing on the character of Raphael, as an artist, or as a man, which has not been noted by Passavant with affectionate care. He has, however, one fault as a biographer—he is too partial. Fuseli does not admire the genius of Raphael less than Passavant, but is more discriminating, more impartial, more disposed to do justice to Michael Angelo and other great artists. At the same time, no biographer of Raphael has been more happy in pointing out his peculiar excellencies than Fuseli. As these various characteristics render his estimate valuable, especially to the student of art, we extract the following passage from his edition of Pilkington, feeling satisfied that even those who have seen it before will not think it out of place in an article necessarily limited in its details:

"The general opinion has placed Raphael at the head of his art, not because he possessed a decided superiority over every other painter in every other branch, but because no other artist arrived at uniting with his own peculiar excellence all the other parts of the art in an equal degree with him.

"The drama, or in other words the representation of character in conflict with passion, was his sphere; to represent this, his invention in the choice of the moment, his composition in the arrangement of his actors, and his expression in the delineation of their emotions were, and are, and perhaps will be unrivalled. And to this he added a style of design dictated by the subject itself, a color suited to the subject, all the grace which propriety permitted or sentiment suggested, and as much chiaro-scuro as was compatible with his supreme desire of perspicuity and evidence. It is, therefore, only when he forsook the drama to make excursions into the pure epic or sublime that his forms became inadequate and were inferior to those of M. Angelo; it is only in subjects where color from a vehicle becomes the ruling principle that he is excelled by Titian; he yields to Correzzio only in that grace and that chiaro-scuro which is less the minister of propriety and sentiment than its charming abuse or voluptuous excess, and which sacrifices to the eye what was claimed in vain by the mind.

"Michael Angelo appears to have had no infancy—if he had, we are not acquainted of it: his earliest works equal in principle and elements of style the vigorous offsprings of his virility: Raphael we see in his

cradle, we hear him stammer: but propriety rocked the cradle, and character formed his lips. Even the trammels of Pietro Perugino, dry and servile in his style of design, formal and Gothic in his composition, he traced what was essential, and separated it from what was accidental, in figure and subject. The works of Leonardo and the cartoon of Pisa invigorated his eye, but it was the antique that completed the system which he had begun to establish on nature. From the antique he learned discrimination and propriety of form. He found that in the construction of the body the articulation of the bones was the true cause of ease and grace in the action of the limbs, and that the knowledge of this was the true cause of the superiority of the ancients. He discovered that certain features were fitted for certain expressions, and peculiar to certain characters; that such a head, such hands and such feet are the stamen or the growth of such a body, and on physiognomy established uniformity of parts. When he designed his attention was immediately directed to the primary intention and motive of his figure, next to its general measure, then to the bones and their articulation, from them to the principal muscles or those eminently wanted, to their attendant nerves, and at last to the more or less essential minutiæ; but the character part of the subject is infallibly the characteristic part of his design, whether it be a rapid sketch or a more finished drawing. The strokes of his pen or pencil themselves are characteristic: they follow the direction and texture of the part; flesh in their rounding, tendons in straight, bones in angular lines."

Julius II. died on the 22d of February, 1513, but the event did not for a single moment interrupt the labors of the artist. Giovanni di Medici, known as Leo X., now assumed the pontificate. He passionately loved art, and strove his utmost to enhance its interests and splendor. To Raphael he proved as generous a patron as had his predecessor. Up to this time Raphael had completed the paintings in two *stanze* of the Vatican. Those in the first room are remarkable for the grandeur of their subjects, the depth of thought displayed in them, the pureness of the drawing, and the severe beauty of the execution; whilst those in the second room show greater experience in technical points; the execution is bolder, the coloring superior, the general disposition grander. The subjects are also more dramatic. Life and the violent feelings of the soul prevail in it, and carry away the spectator irresistibly.

When Leo X. ascended the throne Raphael had already spent five years in Rome, during which time he had found many admirers. Now, these admirers had been forced, by his extreme kindness and amiability, to acknowledge themselves his friends. Among these friends were Castiglione, already mentioned, who had come to Rome as an ambassador; Cardinal Bembo, who brought back, says Bettinelli, the times of Cicero and Virgil, and whose style recalled that of Petrarch and Boccaccio; Sadoleto, who was also the intimate friend of Erasmus of Rotterdam; Andrea Navagero and Agostino Beazzano, both distinguished authors.

It has also been maintained that Raphael kept up a long correspondence with Ariosto; indeed, several letters which passed between them still exist. But nothing very definite is known regarding the intimacy of the friendship. Poor Ariosto! He came to Rome seeking pity, and failing of his aims went home in disgust.

Surrounded by men of such high position, encouraged, flattered and petted whithersoever he went, Raphael was in a fair way to make not only his name but also his fortune. He had already accumulated a sufficient sum of money to build him an elegant mansion on the Via di Borgo Nuova, in the vicinity of the Vatican. This beautiful edifice no longer exists. "The angle of the right of the basement, which now forms a part of the Accoramboni palace, is the only part that remains. We owe our acquaintance with its façade to the engraving published by Antonio Lafrerio in 1549. The only copy of this engraving known is in the library of Prince Corsini at Rome; and it has been copied by Pontani in his work on the architecture of Raphael."*

The friendships of Raphael furnish interesting themes for consideration. His influence was, indeed, so great, that all those who approached him laid aside their own artistic individuality, and sought to adopt his mind and manners. Ra-

* In his native town there are still standing two adjoining houses that had belonged to the family of Raphael; on one of these is the following inscription, which would long since have been oblitrated, had not the ad-

phael, one day, smilingly said to Cesare da Sesto, one of the most distinguished pupils of Da Vinci, and whom he was very fond of, "How does it happen, dear Cesare, that we live in such good friendship, but that in the art of painting we show no deference to each other?"

While the artist was busily engaged upon two pictures of Saints Peter and Paul, two cardinals called to see him. They came for the express purpose of getting into a discussion on art, but did not know how to commence it. One of them remarked that the heads of the apostles were too red. Whereupon, Raphael responded: "You need not be surprised; I have given them that color after deliberate reflection; for it may well be supposed that the apostles, St. Peter and St. Paul, must blush as deeply in heaven as in these pictures, on seeing the church governed by such men as you."

Vasari mentions Raphael's mistress; and one is now perplexed to know who she was. It is said that the artist, while working in the first stanza of the Vatican, fell deeply in love, "and even endeavored to express his passion in three sonnets," which still exist in the rough copy. The girl's name was Margarita, or as others say, Fomarina, and was the daughter of a soda manufacturer, who lived near Santa Cecilia on the other side of the Tiber. Raphael is said to have seen her for the first time while she was bathing her pretty feet in the garden. He was struck by her marvellous beauty and fell in love with her; which love, it is said, ripened into the closest intimacy. The story is a pretty one, no doubt; but we must

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mirers of the great artist revived the letters at intervals, so as to keep them legible:

Nunquam moriturus
Exiguis hisce in ædibus
Eximius ille pictor Raphael
Natus est
Oct. Id. Aprilis, an. MCDLXXXIII.,
Venerare igitur, hospes,
Nomen et geninm loci.
Ne mirere:
Ludit in humanis divina potentia rebus,
Et sæpe in parvis claudere magna solet.

Contentedly believe with Passavant—who has weighed the subject carefully—that it is a pure invention, and that "Raphael loved a young girl, who lived with him, and to whom he was devotedly attached to the last moment of his life." But a valuable document still remains, which must be inserted here. It is a letter written by Raphael to his uncle, Simone Ciarla, at Urbino:

"To my uncle, dear to me as a father, Simone di Battista di Ciarla, at Urbino.

"I have received your dear letter, and am happy to see by it that you are not angry with me, though indeed you would be wrong, if you consider how difficult it is to write without a serious motive. To day, as there is something of importance to say, I reply to you at once.

"In the first place, as to taking a wife, I will say in regard to her whom you destined for me, that I am very glad, and thank God for not having taken either her or another. And in this I have been wiser than you who wished to give her to me. I am convinced that you see yourself that I should not have got on as I have done. I have already property at Rome to the amount of 3,000 ducats of gold ($4,320), and an income of 50 ducats. Then his Holiness, our Lord, has proposed to me some works in the church of St. Peter, with a salary of 300 ducats of gold, which will not fail me as long as I live. This is not all. Besides this, they will pay me for my work whatever may seem right to me. The paintings also in another hall that I have undertaken will produce 1,200 ducats of gold. Thus, then, dear uncle, I am doing honor to you as well as to my other relations and to my native town. I bear you continually in my heart, and, when I hear you mentioned, it seems as if I heard my father named. * * * I had left off speaking of my marriage, but return to it, to tell you that the cardinal of Santa Maria in Portico wishes to give me one of his relations, and that with the consent of my uncle the priest and your consent, I have placed myself at the disposition of his lordship. I cannot withdraw my word; we are nearer than ever to the conclusion, and I will inform you immediately of everything. Do not be vexed if this affair end well; but if it should not, I will do what you wish, and know that if Francesco Buffa finds good matches, I can do so too; for I might have a beautiful young lady at Rome, and by what I hear, both herself and her relations of good reputation, with a dowry of 3,000 scudi of gold; and be sure that 100 cicares at Rome are worth more than 200 at Urbino * * * Salute all my friends and relations in my name, especially Ridolfo, who bears such great and kind affection to me.

"This July 1st, 1514.

"Your RAPHAEL, painter at Rome."

The young woman mentioned as one of the relations of the cardinal, was Maria da Bibiena. It has been supposed, however, that, being in ill-health, the marriage was necessarily postponed; and that her death put an end to all hopes and anticipations. We will not repeat the many inferences which have been drawn from this delay. Raphael could not have been averse to the marriage, and only waited the proper moment to consummate his projects.

From this time (1516) onward, Raphael applied himself diligently to his labors; and the history of his life is mostly contained in the history of his works. As we have already remarked, the works do not concern us at this time—we seek only the *man*. But how blank the stare, when we attempt to scrutinize into his inner life! He seems like a mere waif floating on a sea of immortal masterpieces, the wavy brilliancy of which, flashing brighter and brighter, almost conceals him from our view. He moves, he walks, he converses, he lives, among the men of his day. They stand out in full relief; but he, alas! we know him only by name.

And so it is that we are struck by the writings of his biographers. Passavant, De Quincy, Von Rumohr, Nagler, nay, all, seem as if groping in darkness. Hardly one romantic incident creeps out from the latter pages, to give energy and natural life to the monotonous catalogue of works. But such works! when will you find any more beautiful, and more truly sublime.

A journey to Florence, in 1516, induced not to rest and recreation, but to work; a return to Rome was confronted by an overwhelming host of orders. And thus the suit of labors was kept up unremittingly. One is taken by surprise while enumerating the number of easel pictures executed by Raphael at this time. His productiveness was as inexhaustible as his imagination. One of his pupils asked him, one day, how he had managed to produce so quickly such a large number of works. He replied: "From my earliest childhood I have made it a principle never to neglect anything."

Our pen is now brought to the brief delineation of the last scene. It must first be mentioned that Raphael's paint-

ings in the Chigi palace had excited much criticism; and the opinion was publicly expressed that his talent was on the wane. To such an opinion the artist was sensitive, and he resolved to refute it by some brilliant work. The Cardinal Guiliano de' Medici commissioned him to paint a "Transfiguration" for the church in the diocese of Narbonne. The Transfiguration was the last effort of his life, and, certainly, one of the grandest. Passavant, in his scholarly work on the life of the artist, thus writes of it:

"Raphael divided his subject into two distinct parts. In the upper part, Christ has just risen into the air above Mount Tabor, and has appeared to his apostles, in the midst of a dazzling and supernatural light, of which he himself is the centre. His eyes and arms are raised to heaven. At his side, likewise self-supported in air, are figures of Moses and Elijah. On the mountain itself the apostles, Peter, James, and John, are lying prostrate on the ground, their eyes being unable to bear the brilliancy of the supernatural light. 'This is my beloved son; hear him.'

"But when our eyes descend from this height to the lower part of the picture, we are struck by the most striking contrast between the celestial apparition, which is so full of majesty, and the human and demoniac nature in its most disturbed state; for the principal subject of this part of the composition is a father, who has just brought his son, possessed by a devil, and is vainly seeking help from the apostles. The physical and moral suffering, the misery and weakness of human nature on the earth, are heart-rendering sights, but this feeling, which the master wished to arouse as a contrast between things celestial and terrestrial, finds its consolation and true christian interpretation in the different gestures of the apostles, directed towards the Christ, the Saviour of men. These gestures, so animated by faith, unite the two scenes in the composition and form them into one of the greatest richness and divinely-combined depth.

"We must remark a strange and almost miraculous coincidence. The last picture that Raphael painted of the history of Christ was the 'Transfiguration,' as the last picture of the Madonna, which terminated his many representations of the Virgin, is the 'Madonna di San Sisto,' in which the Virgin seems transfigured by the celestial light which surrounds her. It may be said, too, that these two masterpieces are those that have excited the most constant admiration and the greatest veneration during three centuries throughout all christendom."

It was, while engaged in finishing the sublime painting

just described, that Raphael was struck down prematurely. He had caught a severe cold while pushing his researches among the ruins of Rome, and this illness terminated in a violent fever. Before his death he was able to execute his will. To Margarita, the girl whom he had always loved, he bequeathed a rich amount of his property. His relations at Urbino, and his friends everywhere, were each generously remembered. During his last illness, the pope did every thing in his power to re-assure and encourage him. Great was his fright when the apartment he occupied, and which had been built by Raphael, fell down!* He was obliged to move from it as soon as possible, and his fear redoubled when he learned, almost immediately, that the great master had breathed his last. Raphael died on Good Friday, April 6th, 1520, in the thirty-eighth year of his age; and was buried in one of the small chapels in the Pantheon.†

As an illustration of the veneration in which his memory is held throughout Italy, especially at Rome, we may mention

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* It should be remembered that Raphael was a great architect, as well as a great painter, and wrote elaborate and learned works on architecture. An edition of these works was published at Rome, in 1845, by Carlo Fontana, one of the most eminent Italian architects of the present century. M. Ch. Blanc, one of the French biographers of Raphael, gives his impressions of his style as follows:

"C'est un style élegant et pur, une harmonie harmante dans les proportions, beaucoup de saillie et de richesse dans les profils, d'où résulte un jeu pittoresque d'ombres portées, l'accouplement habituel des colonnes et des pilastres adossés aux trumeaux des entre-croisées, un prédilection particulière pour les *corniches* (les frontons?) alternativement cintrées et triangulaires, enfin la superposition des divers ordres d'architecture, en commençant volontiers par le rustique pour le subassement et en passant par l'ionique, pour finir par le corinthien."

† "Sa mort fut pour Rome et pour l'Italie," says M. Gruyer, "un deuil universel. Son corps fut exposé sur un lit de parade ayant à sa tête le tableau inachevé de *La Transfiguration*. Ses funérailles furent splendides, et il fut déposé au Panthéon, non loin de la pauvre Maria Bibiena, sa fiancée, et sur sa tombe le Bembo inscrivit une epitaphe qui se termine par ce distique si connu:

"'Ille hic est Raphael, timuit quo sospite vinci
Rerum magna parens et moriente mori.'"

—*Essai sur les fresques de Raphael au Vatican.*

that, in 1833, a commission consisting of the principal members of the various academies of the Eternal city was appointed for the purpose of searching for his tomb and ascertaining whether it contained his remains. The search lasted seven days, until finally the skeleton of the great artist was found under the altar of the Virgin Mary, where it had lain for more than three centuries. The enthusiasm which this discovery created is will described by Nitoly, in a letter written to Quatremère de Quincy, from which we extract the following passage:

"Vous ne pouvez vous figurer, l'enthousiasme qui s'empar de nous lorsque, par un dernier effort, on découvrit les restes d'une caisse mortuaire et le squelette tout entier, étendu tel qu'il avait été placé, légèrement couvert de terre ou de poussière humide provenant des débris de la caisse qui était décomposée et des vêtements et des parties molles; on reconnut que le tombeau n'avait jamais été ouvert. Le premier soin que l'on prit fut de degager, peu à peu, le corps de cette poussière, que d'ailleurs on recueillit religieusement pour la replacer dans un autre sarcophage. On trouva dans ces débris des morceaux de la caisse, qui était de bois de pin, et des fragments de peinture qui avaient orné le couvercle, plus de morceaux d'argile du Tibre, indices qui prouvent que l'eau du fleuve y avait pénetré au moins par infiltration, plus une *stilletta* de fer, sorte d'éperon dont Raphael avait été décoré par Léon X., quelques fibules, beaucoup d'*anelli* de métal, partie des boutons du vêtement."*

Raphael had a regular, agreeable, and delicate face, well-proportioned features, brown hair, eyes of the same color, full of sweetness and modesty; the tone of the face bordering upon the olive; the expression, that of grace and sensibility. His neck was long, his head small, his frame feeble; nothing in him indicated a constitution of long duration. His manners were charming; his exterior was prepossessing; his dress was elegant—in a word, he belonged to the *bon ton* of Roman society.

The artist's moral qualities fully coincided with his physical features. Of gratitude for kindly action he lacked not a whit. Feelings of envy or jealousy never entered his mind. He was free to give assistance and to offer his services when needed. Though not strictly possessed of a high

* *Vie de Raphael*, par Quatremère de Quincy.

education, he was, nevertheless, well informed. From his earliest youth, he had aimed to know the causes of all things, and seeking knowledge he always found it. Of Raphael's character as a painter, it would be presumption to say anything. People do not like to be told what they learned already in infancy. Whatever may be said of the artist Raphael, can be only in praise; such praise posterity has bestowed for more than three centuries. As did the past, so will the future continue to address to the great painter of Urbino, the famed eulogy of his earliest biographer, TU SOLO IL PITTOR SEI DE' PITTORI.

ART. V.—1. *Obituary Notices of the late* REV. ISAAC FERRIS, D.D., LL.D. June, 1873.

2. *Funeral Oration.* By ALEXANDER R. THOMPSON.

3. *Biographical and Obituary Notices of the late* REV. JOHN EARLY, S.J. June, 1873.

4. *Catalogues of Colleges, Universities, etc., Good Bad, and indifferent.*

5. *Some Catholic Organs and their Performances.* New York and Cincinnati.

BEFORE we mention either of the honored and beloved names which stand at the head of this paper, and which, with their good works, are all we have now left of those who bore them, we beg leave to make an observation or two; only premising that although they may delay the reader a few minutes, will seem neither irrelevant nor uncalled for at the end. There will be something else also for which we should probably ask indulgence in advance, for we intend taking the liberty of interspersing our remarks with some personal reminiscences and experiences, and perhaps introducing here and there a little episode which may seem to violate the unities. We feel all the more justified in claiming to be thus indulged

because we are convinced that there is no intelligent, unbiased man, or woman, whether Catholic or Protestant, that accompanies us in our discussion, who will not admit at the close, if not before, not only that our object is a good one, but that our discussion will do good. Were it possible for us to write a separate article on every topic connected with higher education, which we feel claims more or less attention, then we would avoid the discursive style, refrain from digressions and exclude episodes. Especially would we do so when our chief object, as in the present instance, is partly to pay our humble tribute to those honored dead, whose honors were earned by the most useful labors perseveringly and faithfully performed, and partly to suggest to such of the living as are so disposed how they may profit by those labors, or by the good examples which they present. But such a course is not possible. Moreover the very name of a *review* embraces the idea of a wide range; and those who established the first periodical bearing that name claimed Socrates as their prototype; and more particularly did they invoke the example of the great Athenian sage in making their comparisons between the good, bad and indifferent, and contrasting the different species with each other.

It is a strange commentary on public sentiment in this country that, of all occupying important positions, none are less honored in life or in death than our educators. At first sight, it may seem a paradox that if they do, sometimes, receive honors it is much more for their being incompetent than for their being competent; but such, nevertheless, is the fact. Those who are educators merely in name, and are in sad need of education themselves, are treated as great personages—precisely the class alluded to by Quintilian, when he says, that "none are more contemptible than those who, having got the merest smattering in learning, vainly persuade themselves, and try to persuade others, that they are men of knowledge,"*

* Nihil enim pejus est iis qui, paulum ultra *primas literas*, progressi, *falsam* sibi scientiæ *persuasionem* induerunt.—*De Institutione Oratoris*, lib., i. 2.

whereas those who are qualified for their work, and perform it faithfully and efficiently, may live and die without receiving the slightest recognition beyond the circle, necessarily narrow, in which their labors have been performed, and in which are embraced those capable of appreciating how much they owe them. Among this class, indeed, they are regarded, in their true light, as benefactors; they are esteemed and respected in life, and their memory is gratefully cherished in death. It is true that this satisfies their ambition, because it is not for the praises of the thoughtless multitude they toil, but justly think, with Seneca,* that the approbation of a dozen persons capable of estimating the value of their labors is better than that of as many thousands, or even millions, of those utterly incapable of forming any opinion on the subject.

But how are the incompetent more honored than the competent? True, the honor the former receive is a spurious honor, but its influence is all the more demoralizing—all the more injurious to the great cause of education—on this very account. Do our readers require us to explain this? A few may, and for the satisfaction of this few, we ask, how many heads of colleges and universities are there who are much more politicians than educators, and who never would have been called educators, even by the most exaggerated courtesy, had they not first devoted themselves to a greater or less extent to the trade of politics? Then let us suppose that a dozen presidents and chancellors of colleges and univerities visit the national capitol to-morrow, which of them would be most likely to receive an invitation to dine with our rulers? Who will say that it is the best qualified to direct the studies of any educational institution? Is it not much more likely that it is the one that is most notoriously unqualified who would receive the invitation? In other words, those capable of transforming the human mind, as the sculptor does the block of marble, might visit our seat of government many a time, or perform his most important labors beside it, without being

* Non tam bene cum rebus humanis agitur, ut meliores pluribus placeant; *argumentum pessemi turba* est.—*De Vit. Beat.*, 2.

noticed in any manner, while the one who can transform nothing without *de*forming it, but who is as powerful as a pugilist in influencing votes, is transformed, himself, into a lion!

M. de Tocqueville has justly remarked, in his "Democracy in America," that this state of things alone would be sufficient to account for the marked inferiority of our colleges and universities as compared to the corresponding institutions of Europe. But we should not need to be told any such thing; the pernicious influence of the habit alluded to is sufficiently obvious. That it should strike foreigners of the powers of observation and analysis of De Tocqueville more forcibly than it does even the most thoughtful and most intelligent of our own people, will not seem strange when it is borne in mind what different views are entertained on those subjects by the governing class in Europe.

In all ages enlightened sovereigns have been the friends and protectors, not only of the heads of educational institutions, but of scholars in general. The same is eminently true of enlightened popes. The most careful student of history, from the time of Pericles to the present, could not point out a single exception to this rule. For many centuries all the great capitals of Europe have had their aristocracy of intellect and knowledge; and there is not one of them which does not retain it still. In London, Paris, Berlin; even in St. Petersburg, as well as in Rome, Florence and Naples, the proudest and most exclusive of the nobility receive and treat scholars as equals, often as superiors, whether they are engaged in education or not. And this they do without waiting to inquire whether they have sufficient money to procure them their daily bread. But where, except, to some extent, in Boston, have we any such aristocracy? Where amongst us is not the butcher, the fishmonger, nay, the fraudulent imposter, treated as a person of greater importance, and one worthy of more consideration, if he only have money, than any mere educator or mere scholar?

Kings and queens, princes and princesses, popes and cardinals have not only been in the habit of treating edu-

cators and scholars with quite as much consideration as the highest and most powerful of their nobility; they have, also, been in the habit of giving them annuities for life.* However stubborn and arrogant George III. was, he took a pride in honoring learned men. There was not one of his wealthy dukes or lords with whom he was so anxious to converse as with Dr. Johnson, even when the latter was so poor that he was obliged to borrow a pair of boots, and even a pair of pantaloons, in order to prepare himself to be waited upon in the Queen's library by his Majesty. It is almost superfluous to remark, that the consideration and respect thus evinced throughout Europe, by those in power, for educators and scholars, while no consideration or respect is evinced to sham educators or sham scholars, but contempt and scorn, exercise no slight influence on public opinion in favor of higher education.

But apart from our political presidents and chancellors of colleges, there is another class about whom a very great fuss is made, and who owe that fuss not to their learning, or to their qualifications as educators, but to causes and influences little less objectionable, or less injurious to the cause of education than the charlatanism of partisan politics. We need hardly say we allude to those clergymen of different denominations, made presidents, chancellors or rectors because they are bigots and ranters who think none not belonging to their own sect deserve anything better in this world than reproaches and revilings, or anything better in the next world than fire and brimstone. This class is much more numerous than most of our readers would believe at first sight, because each sect regards its own bigot and ranter as no bigot or ranter, but as a

* That this is neither a recent nor a transitory habit in England, but one that has grown with its scholarship—one that had already taken root so early as the time of Erasmus and Cardinal Woolsey—is well illustrated in the case of the celebrated Dr. Busby, who, being asked how he contrived to keep all his preferments, and the headmastership of Westminster school, through the successive, turbulent reigns of Charles I., Oliver Cromwell, Charles II., and James II., jocosely replied:

"The fathers govern the nation, the mothers govern the fathers, the boys govern the mothers, *and I govern the boys.*"

pious divine and great pulpit orator. It is difficult to decide how much better this class are, if better at all, than those who owe their positions as educators to their politics, especially as those who are bigots in religion are apt to be also bigots in politics.

It is certain that the press is not blameless for this state of things. Indeed it is more fostered by the newspapers than by all other means and influences. It is also the newspapers that make the ranting preachers of all denominations, who happily have no connection with any educational institution, much greater personages than the modest, unobtrusive clergymen, who teach faithfully and well both in the class-room and in the pulpit. The former have their platitudes spread out like blankets—often like blankets reeking with noxious exhalations—and lest the doses of distorted religion thus administered—exactly the sort of religion denounced by the great Roman poet-philosopher as calculated to degrade rather than to elevate the human mind*—might not be sufficient to purify and reform a perverse generation, the ranters are "interviewed" *ad nauseam;* whereas the clergyman worthy of the name, who devotes himself to the class-room and performs those duties, without which all others are of comparatively little use, is neither reported nor "interviewed."

Still more neglected is the layman devoted to education. But strangely enough the most neglected of all is the "monk," who is neither a priest nor a politician, but who has consecrated himself for life to teaching—that is, he whose chief object in life is the cultivation and development of the intellect. As for the latter, he need expect little more than toleration, with or without frowns, or sneers, even from some of those high ecclesiastical dignitaries who ought to be his best friends and protectors, and who do far less for the prestige of the Church, by their pompous plagarized sermons and their arrogant domi-

* Humana ante oculos fœde quum vita
In terris, oppressa gravi sub religione
Quæ caput a cœli regionibus ostendebat,
Horribili super *aspectu* mortalibus instans.

Lucretius, *De Rev. Naturâ*, l. 63.

neering edicts to their clergy, than he does by his unostentatious, but solid and thorough, teachings, in the class-room.

At commencement time there is, indeed, reporting enough, vastly more than is necessary; but even then it is those who teach or can teach least, those who most need to be taught themselves, that are most eulogized, partly because those who really deserve praise do not seek for it, and partly because those who deserve censure instead of praise for their ignorance and effrontery are determined to have the latter, and in as large doses as possible, let it cost what it may.

The same remarks, but slightly modified, apply to female educators. Who needs to be told that a third or a fourth rate actress receives far more encouragement from what is called public opinion than a first-class teacher. Whatever the former says or does is chronicled as a great event, whereas the accomplished and faithful teacher who has devoted her life to the development of the mind is no more thought of or encouraged beyond the scene of her labors, or beyond the circle in which the good work she has done is known by its fruits, than the chambermaid or the sewing girl, to whom it has never occurred that knowledge is divine, and that no preacher, whether he be called minister, priest, or presbyter, can be a divine without it. Nay, is it not true that women who commit the most attrocious crimes—women who outrage public decency and disgrace their sex—obtain more sympathy, when, being unable to conceal their crimes any longer, they are placed under restraint, with more or less prospect of being punished as they deserve, than our best and most faithful female teachers do when suffering from infirmities brought on by overwork for the cause of education—that is, for the cause of humanity, the cause of religion, the cause of public and private virtue? We could easily illustrate this comparison in order to prove its truth and justice, but there are none of our readers whose memory will not furnish them with but too many illustrations of both sides of the picture.

We need hardly say, then, what our feeling was when we saw the venerable Chancellor of the University of the City of New York and the amiable President of Georgetown College

pass to the grave, after having worked so long, so well and so successfully, for the great cause, without any other notice than a brief obituary, beyond the natural outpourings of private friendship and personal affection and esteem. We could not help regarding this as ingratitude on the part of the public, and as evidence of a vitiated public sentiment, especially when we looked around and saw how differently the politicians, ranters, and other charlatans who died about the same time were treated—how all who died possessed of wealth, no matter how dishonest and base were the means by which they accumulated their wealth, were raised to the skies in clouds of puffery, as the salt of the earth.

So different were the religious dogmas represented by Dr. Ferris and Father Early, that it seems almost an anomaly to place their names side by side at the head of an article, for any other purpose than that of contrast. But although each was faithfully and even enthusiastically devoted to the church of which he was a minister, neither had a particle of feeling against any other church, or against any individual, on account of his faith. We are aware that many think it impossible that a Presbyterian minister and a Jesuit priest, above all others, could be thus liberal and cosmopolitan, but we can bear emphatic testimony, from our own knowledge, to the truth of the fact in this case.

We know that every nineteen of our readers will believe the liberality of the Presbyterian minister for every one who accepts that of the Jesuit priest, and yet Father Early was just as free from bigotry, and as ready to become the faithful, unswerving friend of those belonging to a different creed from his, as Dr. Ferris, than whom a more liberal or more generous nature has never existed. Thus, although the statement may seem almost a contradiction in terms, the Calvinistic Chancellor of the University of the City of New York, and the Jesuit President of Georgetown College, were alike in their views as to the fundamental requirements of religion as distinguished from mere dogma or sectarianism. This, however, is but saying, in other words, that both were capable of comprehending what religion is, and that its object is not to disseminate strife,

or to instigate one to hate, or at least to dislike another, but, on the contrary, to teach all that, although they may differ in opinion, even in regard to their Creator, or the particular manner in which He is to be worshipped, it is both their duty and their interest, nevertheless, to cultivate feelings of good will and amity toward each other.

We will not ask our readers whether every educator ought not to be thus liberal and generous, or whether there is any other feeling that does honor to human nature which makes a nearer approach to that divine "charity which covereth a multitude of sins," if, indeed, it be not identical with it. And if the Presbyterian chancellor and the Jesuit president were alike in entertaining this noble sentiment, still more, if possible, did they resemble each other in their views as to the proper government and best interests of a great literary institution. No higher praise could be bestowed on the Jesuit president, as an educator, than to say that he was quite as willing to have the minutest details of his system examined by all who took an interest in education as the Presbyterian chancellor. Nay, it was not merely willing that either was in this respect—each wished to invite examination and elicit opinion.

And, perhaps, they have not left behind them in America four chancellors and presidents belonging to all denominations, if we except the model educators of the Christian Brothers, of whom the same may be said without qualification. Those who are influenced more by sectarian bigotry than by a sense of justice or merit, will think it strange that we, who have criticised the qualifications of so many of our Jesuit professors, or rather, denied that they had any qualifications higher than those regarded by Quintilian as insufficient even for primary schools, should admit that one of this four is to be found among the Jesuits of America. True, so modest is Rev. James Clark, formerly president of Holy Cross College, Massachusetts, the gentleman to whom we allude, that few meeting him casually would suppose that he has any qualifications or abilities above mediocrity; but we think we should be guilty of injustice, at least

wanting in fairness and impartiality, did we intentionally omit the name of that gentleman in limiting the number of American educators who combine all the essential qualifications for that noble calling which, in our estimation, is not second even to that of a minister of the gospel.*

But, as we have said, it is not men of this stamp, whether clergymen or laymen, whom the American world is called upon to admire at the present day. It is not the death of such that creates any sensation, or causes any public grief. Yet we boast of our immense superiority to the ancients in our appreciation of knowledge and enlightenment—those ancients who, if they did injustice to any of their leading educators while they lived, did everything in their power to atone for that injustice after their death. Even in the middle ages, when mankind, with the exception of a few master-spirits, may be said to have fallen into a state of lethargy, those who devoted themselves to the development of the intellect, were gratefully and affectionately remembered when they passed away. It was in accordance with this feeling that Thomas Aquinas was called "the Angel of the Schools" and "the Angelic Doctor"—he of whom Macauley says: "We extol Bacon and sneer at Aquinas. But if the situation had been changed, Bacon might have been the Angelic Doctor." In short, the ancient Pagan world has transmitted to us no names with more pious, affectionate care than those of its educators—there are no names which it has honored more, or upon which it has shed a more brilliant lustre.

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* We would not be understood, however, as meaning that there are not excellent American educators who give their instructions in institutions which are not called either colleges or universities. Our readers may remember that it has afforded us pleasure to indicate such, from time to time, in these pages, so that others might profit by their example. It will be sufficient, therefore, to give one instance now, and we know no better than Prof. Otis Bisbee, Principal of Riverview Academy, Poughkeepsie. But we think the educator of Riverview may well congratulate himself, in this case, in the language of Horace, that his learning has ranked him among the veritable gods of our educational institutions.

"Me doctarum hederæ præmia frontium
Dis miscent superis."

We are glad to say, however, that some of the colleagues and personal friends of the two recently departed educators have paid their tributes faithfully. Two or three of those of the venerable Chancellor have, indeed, acquitted themselves well in this respect; a remark which applies with peculiar force to Rev. Dr. Alexander R. Thompson, whose funeral oration contains passages so good, and so much in accordance with our own impressions, that we do not hesitate to give some of them a place in this article. After some introductory remarks, Dr. Thompson proceeds:

"There is a luxury which we will not deny ourselves—we who knew him well—of recalling and holding before our hearts the image of him, as our hearts will keep it. Some of us undoubtedly knew him more intimately than did others. Some of us have known him since our childhood. There be men here to-day knit to him in life-long friendship; venerable men, who, side by side with him, have fulfilled a life-long service in the gospel. There be men gathered around his bier who have undertaken with him grand enterprises; who have borne with him heavy burdens; who have toiled with him in exhaustive labors; who have walked with him in pleasant counsel."

This, indeed, is no mere rhetoric—no mere friendly compliment to departed worth, but the language of sober, earnest truth—language in the justice of which all intelligent, unbiased men, let them belong to what denomination they may, who knew the venerable Chancellor, will readily concur. Still more just and truthful, if possible, is the following:

"He was of mortal clay, as all of us are, and therefore was not beyond error and censure. But who lays to his charge *anything mean, or false, or ignoble?* Who ever learned from him intrigue, or the low cunning that holds that the end justifies the means? Who ever saw him falter from a lofty purpose, *or turn and give it up with a coward dread of labor or reproach?* Who knew him to neglect what he deemed to be a call of duty; or repel with harshness the wretched or sinful; or impatiently put by the inexperienced and erring? Who ever suspected him of indolent self-seeking, or of shirking duty because it was painful? Down to the day when his hoary head among us was a crown of glory because it was found in the way of righteousness, *who of us lost our confidence for a moment in his grand integrity, his cheerful courage, his intrepid devotion to duty, his gentle kindness, his dignified courtesy, his clear-sighted wisdom, and his Christian truthfulness?*"

To how many of those politicians, office-holders, and ex-office-holders, whose death has been honored with the most extravagant public pageants, could any such language as this be applied, except in scornful irony? Referring to the connection of Chancellor Ferris with different educational institutions, male and female, Dr. Thompson says:

"His life has been abundant in fruitful good-doing. A good scholar and a man that never fell behind his age, he had much experience all through his life as an educator. From a very early period, he took a leading position in favor of higher education. During his pastorate in Albany, and later, during his pastorate in New York, his influence was deeply and widely felt in this direction. Later, his life was crowned by an able and efficient administration as the revered head of the University of this city. In this most responsible position, his peculiar ability had a fair opportunity. His clear head and steadfast hand regulated rapidly its affairs. The confidence which the eminent and wealthy members of this community justly reposed in him drew to its support their kindly interest. *His patient fatherliness soothed, controlled, quickened the fresh young life around him.* His enthusiasm kindled enthusiasm. In every channel of the academic life he made himself felt for good. There are men in high station, serving God and their generation by the will of God to-day, who owe their reclamation from foolish and ruinous habits, their salvation from reckless and desperate sinfulness, to *his guiding hand and gentle word.* A true disciplinarian, he never ceased to be the father of his students. And when in advancing years he laid down his rod of office, it was with the abundant, reverential regard and affection of his honored associates in our noble University, and of the young men who had been under his guidance and care."

There is not a single exaggerated statement in this passage—not one which the faithful historian, or biographer, may not adopt; and what higher praise could be bestowed on an educator, on a citizen, or even on a minister of the gospel? But we cannot take leave yet of Dr. Thompson's eloquent address. The portrait which he draws of the kind, good, Chancellor is so faithful that we cannot help lingering about it. Accordingly, although the space we had prescribed for extracts from it is more than filled, we cannot lay it aside without snatching another fragment or two from the biographical part. Like the majority of the world's master-spirits, it was the destiny of Chancellor Ferris to be born to no better

inheritance than honest poverty. But let us hear Dr. Thompson :

"He came of a line of stalwart men who were noted for their loyal service to the country in its revolutionary struggle. There home was in the county of Westchester, between the lines of the contending forces, where the peril of fidelity was extreme. But every male person of the household, from fourteen years of age, was in the service of his country. The muscle and the temper of this good and true lineage were in our friend and father. His mother especially favored his obtaining a liberal education ; perhaps with a fond Christian mother's hope of living to hear him preach Christ's gospel. But the reverses of the war had so straitened his father's means, that if he obtained the coveted education it must be mainly by his own exertions. These were not wanting. And the good providence of God had him under its care. He saved his pocket money till he had enough to buy a pair of skates, and traded them erelong for a latin grammar. A famous teacher of that day, a kinsman of his, known as blind Nelson, took a pride and pleasure in training him. And thus his career as a scholar began. During the war of 1812, his father held the position of captain and quartermaster in the army of the United States. Those were dark and trying times, and it became necessary for the son to lend a helping hand in the discharge of his father's official duties. This, while it hindered, did not bring to an end his purpose to study. For, while he labored assiduously with his hands, in the Quartermaster's Department, he managed to fasten his grammar open before his face, and then kept his brain employed, while his filial hands were not idle."

We have remarked more than once how much superior the generous nature and enlightened understanding of Chancellor Ferris were to sectarian bigotry, or national, or ethnological prejudice, and we could furnish from our own knowledge many illustrations of the fact. But Dr. Thompson presents us one, in the following paragraph, which we think all will regard as sufficient:

"In the year 1821, he became minister of the Reformed Dutch Church, in New Brunswick, from which, in the year 1824, he removed to Albany, to become minister of the Middle Dutch Church in that city. Here, beside the characteristic fidelity and fruitfulness of his ministry, his courage and devotion shone with a heavenly light during the cholera scourge of 1832. All that fearful summer he remained at his post, ministering to the sick and dying of every name and creed. The most prominent Roman Catholic clergyman of the city at that time testified afterward to his intrepid fidelity in going among the

poor, perishing Irish immigrants, and commended his example as that of a true Christian."

There is one other passage which must find a place in this article; one which shows that it was not merely in the class-room, as a professor or chancellor, that Dr. Ferris was willing to toil for the university of which he was the honored head. There were few prouder men, in the best and noblest sense of the term, than Chancellor Ferris; but he was not too proud even to beg, for the purpose of serving the great cause whose interests he had so much at heart:

"In this position he remained with singular usefulness until, in 1852, he was elected Chancellor of the University of the City of New York. This office he accepted at a time when the university was under great depression; but his cheerful energy infused new life into every department of it. It had no political patronage to lean back on, nor vast endowments for its support, but by dint of personal effort he secured gifts to its treasury of over $100,000; wiped out its crushing debt; refitted its philosophical apparatus; put in complete repair its buildings; organized its school of art, civil engineering, and analytical and practical chemistry; established a fund for premiums; secured endowment for several professorships; diminished the labor and enlarged the emolument of the corps of accomplished and devoted instructors; opened facilities for the incoming of students; and with systematic care and tenderness extended help to those who were indigent. The result of his eighteen years of faithful, self-denying, wise, paternal service in this eminent position is visible in the prosperity that attended it, and is treasured in the hearts of faithful men."

Although these passages are not lacking in the graces of language, their chief beauty and force consist in their truthfulness. We have transferred them to our pages, all the more willingly because they corroborate the views we have frequently expressed in this journal during the last thirteen years. And we cannot, ourselves, but regard it as a remarkable fact, and one upon which we may justly congratulate ourselves, that since we became acquainted with the characteristics of Father Early as an educator, we have rarely, if ever, mentioned Dr. Ferris as a model educator, without also mentioning Father Early as entitled to the same distinction. Thus, one was a native of the city of New York, where he was born, October 13, 1798, the other was born at Maguire's

Bridge, county Fermanagh, Ireland, July 1, 1814. One was brought up in accordance with the strictest dogmas of Presbyterianism, the other was brought up in accordance with the strictest dogmas of Catholicism. Did we permit ourselves to be influenced by dogmas in forming our estimates of the qualifications of educators, our bias would naturally have been in favor of the Protestant and against the Catholic.

But the high opinion we have always entertained of Father Early since we were first aware of his qualifications and abilities is not the only evidence we could adduce in proof of our being incapable of any such bias. Even the venerable, beloved Chancellor did not stand higher in our estimation, or elicit more emphatic approbation from us by his educational labors and their fruits than two successive Catholic presidents of Manhattan College, and more than one of their brethren, in charge of other colleges, have elicited, and continue to elicit. Nay, this is true of another Jesuit Father already alluded to—we mean Rev. James Clark, to whom be all honor. Moreover, there are none of our Protestant bishops or archbishops whose educational labors and influences we have commended more emphatically, or more heartily, than we have those of Archbishops Hughes, Kendrick, and Spalding.

Then let our Protestant readers remember, that while thus awarding the highest praise where, in our opinion, the highest praise was deserved, we were equally free in passing the severest censure on those Catholic educators who were but educators *ex officio* — men still more out of place, if possible, than even the now somewhat notorious Provost Stillé. We will not ask our Catholic readers to remember this, for the majority are but too apt to treasure up as "an attack" on the Church the slightest censure, however well deserved, even on the literary, or rather illiterate, ignorance of any Catholic having the prefix "Rev.," "Right Rev.," or "Most Rev." to his name. But, fortunately, it is not this bigoted, narrow-minded majority we address, but the enlightened, thoughtful minority, the class who have maintained the honor of the Church in all ages, as the generous patron of literature, science, and the arts, in proportion to their number, and to

the circumstances by which they were surrounded, whether those circumstances were favorable or unfavorable. This was the class to which belonged Erasmus of Rotterdam, Copernicus, Staupits, the Augustian monk, Rensche, the Jesuit prime minister of the Duke of Styria, and friend of Kepler, Pope Julius II., Cardinal Bembo, the whole Medici family, but especially Leo X. It was also the class to which belonged Father Early, and the other Catholic educators in this country, whether Fathers or Brothers, with whom we have been in the habit, for so long a series of years, of ranking him.

It may seem vain on our part to present to our readers an illustration of the liberal-mindedness and cosmopolitan spirit of Father Early, from our own personal experience; but we think that no better or more conclusive illustration could be given. Thus, while Father Early was well aware that we had again and again criticised the pretensions of the Jesuit colleges of New York, and Fordham, showing that so far as any real education was concerned, they were, in fact, false pretensions; while aware that we had repeatedly denounced and ridiculed the bombastic, noisy exhibitions, they got up periodically, chiefly, it would seem, for the entertainment and delectation of the chambermaids of the metropolis and their beaux; instead of evincing any clannish resentment or sectarian prejudice against us, the amiable and excellent Jesuit educator not only invited us most cordially to visit Georgetown College, and to assist at its recitations, but he urged us more than once to make the college our home whenever we visited Washington or Georgetown, telling us that he would see that one of the best rooms in the institution would be placed at our disposal for that purpose.

The bigots on both sides will doubtless regard this as impossible; those among the Catholics will probably denounce it as a vile slander on the dead;* or, if they believe it, they will piously cross themselves and ask each other if, after all, there

* This has been the course pursued towards us in other similar cases (instance that of Archbishop Spalding) by certain Catholic organs, which will be referred to more particularly in the course of this article, in order to show how sadly unworthy the American branch of the Church is, as a

was not something grievously wrong at Georgetown. The more charitable and less intolerant of them may excuse the good Father on the ground that, inasmuch as we came from "the Isle of Saints," whence so large a proportion of our good Catholics come, he mistook us for one of the faithful. But Father Clark could hardly have made the same mistake when he was president of Holy Cross College, Massachusetts, and not only invited us repeatedly to visit that institution and assist at its recitations, but, on our accepting his invitation, finally, insisted on our sleeping, as well as dining, supping and breakfasting at the college. Father Clark, being a Pennsylvanian, had nothing to do with "the Isle of Saints;" he was just as little influenced in his friendly courtesy toward us, by country or creed, as was Chancellor Ferris; and it was the American Jesuit who introduced us to the Irish Jesuit, not the latter to the former. At all events, heretic as we were and are, we were not the least afraid that the terrible Jesuits would do us any harm, and we can truly say that never have we spent a pleasanter night, anywhere, than that we spent at Holy Cross; nor can we ever forget how the good Fathers of that institution, actuated by the hospitable and friendly spirit of their excellent superior, vied with each other in their kind efforts to render our visit as agreeable to ourselves as possible; although, like Father Early, all were quite aware that we had freely criticised their brethren of New York and Fordham.

But here we must beg leave to indulge in another digression. Although none who know us will include superstition among our faults, or our foibles, we cannot but regard it as a remarkable coincidence that within the same two or three weeks, during which two of our best and most honored educators were withdrawn by death from the great field of American education, still but partially cultivated, because their mortal race was run, another of the same rank—one

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whole, of the grand old trunk, in intelligence and enlightenment—in all that is favorable to the cultivation and development of the human mind—nay in all that is favorable to decency.

to whom we had many a time compared them as in every respect their worthy compeer, was withdrawn by his brethren because they regarded his educational talents and abilities as too valuable to be confined to one continent. We allude to the gentleman, well-known to our readers, who first attracted general attention and elicited general approbation in the educational world as the President of Manhattan College—an institution which, in a few years, he raised to the highest rank among American colleges. Such was his success that some five or six years ago he was appointed superior of all the institutions of the Christian Brothers in America. How ably and efficiently he has performed his duties in this enlarged sphere is proved by the fact, that at an election held at the chief house of the order in Paris, by their representatives from all parts of the world, he was unanimously elected Assistant Superior General; so that the venerable Superior General having become infirm by age and long service—though his heart is still in the great work, of which he has performed an herculian part—the gentleman who lately directed the intellectual energies of the Christian Brothers throughout this continent, will henceforth direct those of the order in all parts of the world—in China, Japan, India, Egypt, and Arabia, as well as in the United States, the British Islands, and Continental Europe. When it is remembered that the great majority of the Christian Brothers are Frenchmen—that among this majority are literary men, scientists and artists, whose works are prized both in Europe and America, although they are known but to a few themselves—that the venerable founder of their order was a Frenchman—that, in a word, the order is as essentially French in the best sense of the term, as the French Academy, or the Institute; and that accordingly this is the first instance in more than two centuries of the election of any foreigner to that important position—when, all these facts, we say, are borne in mind; some idea, however inadequate, may be formed of the high estimation in which Rev. Brother Patrick is held as an educator by those whose lives are consecrated to education, and who have judged him by the labors he has performed for the great cause, and the

services he has rendered it in all departments, during a period extending to, if not exceeding, a quarter of a century.

The removal of such a man is an incalculable loss to the cause of American education, although it will still receive its full share of his attention; and none regret the loss more than we. We rejoice at the same time, that the bigots in high and low places who disliked the sturdy provincial for that enlightened liberality of sentiment and cosmopolitan spirit, which not only rendered him superior to sectarianism, but made him the good, faithful friend of reviews and reviewers, proved utterly powerless, after all, to prevent his elevation; so that he occupies a much higher and nobler position to-day than the most pompous of them.

We indulge the latter feeling all the more freely because he has left another first class, favorite educator to take his place as provincial—a gentleman who has also well earned his advancement in honor and consideration, for what he has done for Manhattan College during the last five or six years as its indefatigable and judicious President. Then he, in turn, leaves his place to be filled, under his own guidance, by a gentleman who was his chief assistant in that position for years, and who is in every way qualified to maintain the deservedly high prestige of that institution.

To some these details will not only seem irrelevant but altogether uncalled for. But let such pause for a moment and reflect—let them ask themselves how are educators more than others to be judged as to their qualifications and abilities without comparing them with each other and examining the work they perform. Are not they, like other people, good, bad, or indifferent, according as they are better or worse than the majority of their class? Were there not Protestant educators like the Provost of the University of Pennsylvania we should not appreciate as we do educators like Chancellor Ferris, President Barnard, etc. Upon the same principle, if there were not Catholic heads of colleges like the Sheas, the McQuades and the Corrigans, we should not appreciate as we do heads of colleges like Father Early, Father Clark, Brother Patrick, Brother Paulian, etc. Besides we want to show that

Catholic heads of colleges, who are properly qualified for their positions, differ in nothing as Catholics in the course they pursue toward heretics from the Catholic heads of dioceses and archdioceses, who are also properly qualified for their positions. Thus, as Father Early, who would have ranked high as an educator in any country, was not the less friendly to us for being a heretic who had criticised, as educators, certain of his brethren at New York and Fordham, so the Archbishop of Baltimore, who would have been ranked among the most enlightened of the princes of the Church in any age, was not the less friendly to us for our having criticised, on similar grounds, his Most Rev. Grace of New York—not, indeed, the illustrious Archbishop Hughes, but a very different "prince of the Church"—different in intellect, different in knowledge, different in thought; though not different, perhaps, in piety and orthodoxy, but probably superior in largeness of faith, and in largeness of self-importance.

But here we are reminded of the most serious difficulty of all—indeed the fundamental one. The Catholic bishops and archbishops who are sufficiently educated themselves to be able to serve the cause of higher education are far too few. The large majority will bear no comparison with the bishops and archbishops of the poorest countries of Europe. Most cheerfully do we admit that Archbishop Bailey is worthy of comparison with the most enlightened prelates anywhere; and, what is more, worthy of being the successor of Dr. Kendrick and Dr. Spalding. This is no new opinion of ours; it is one which we entertained, as many of our readers know, before there was any word of his appointment. Archbishop Kendrick of St. Louis is another prelate who does credit to the American church. And among the bishops the names of Dr. McFarlan, of Hartford, Dr. Williams, of Boston, Dr. Wood, of Philadelphia, Dr. Lynch, of Charleston, and Dr. Ryan, coadjutor to Dr. Kendrick, may be mentioned as those of competent and enlightened dignitaries.

Thus, we have about as many Catholic bishops and archbishops that are entitled by their education and talents to be ranked with the prelates of Europe, as we have Catholic

colleges that are entitled by their high standard and thoroughness to be ranked with the average Catholic educational institutions of Europe. But the remainder of the bishops and archbishops are quite as much behind their European brethren in education and enlightenment, as the remainder of the Catholic colleges and universities are behind even the Catholic high schools of Europe. And what is most discouraging in this respect is, that the last episcopal appointment is decidedly the worst. The appointment of Dr. Bailey to the see of Baltimore evinced wisdom as well as discrimination, but, putting Father Corrigan in his place, at Newark, and decorating with the mitre one whose characteristic mode of argument is "you lie," etc.—one who has degraded Seton Hall College to the rank of a third rate boarding school and billiard saloon, with deficient "rations" for pupils—evinced neither wisdom nor discrimination.*

What, upon the other hand, is the reward to the memory of Father Early for his having attained the highest distinction as an educator by his indefatigable and successful efforts to have Georgetown College ranked among the best American colleges of all denominations. From the strange appointment just mentioned, and the extensive glorification that followed, it can hardly seem incredible that some of the most incompetent of the heads of Catholic colleges—especially those heads that have money in the family, no matter how they made it—would

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* Once when a similar divine got the mitre, Erasmus wrote a "savage" criticism, both on the new dignitary and on the old dignitary, who was chiefly instrumental in appointing him. On the latter remonstrating, Erasmus said that he would say no more about the disgrace the Church had sustained, if he would cause to be inscribed on some conspicuous part of the cathedral of his protegé, the following lines from Sophocles:

κάρτα τοι φιλοίκτιστον γυνή
πύκαξε θᾶσσον. οὐ πρὸς ἰατροῦ σοφοῦ
θρηνεῖν ἐπῳδὰς πρὸς τομῶντι πήματι.

Soph. *Ajax*, 580.

We might have recommended a similar legend for the Newark cathedral, but a Greek maxim would be as profound a mystery there, now, as the grace of God. It would be a still worse stumbling-block than that which we presented to the learned provost of the University of Pennsylvania, in the same dialect. A line or two from one of Lover's bacchanalian songs, in

have been mourned far more generally and more profoundly than President Early, had any of them, instead of him, been carried off so suddenly. But such is really the fact; and it is one which finds its explanation in human nature, independently of any dogma. Those whose knowledge and views are circumscribed within narrow limits are much more likely to sympathize with those whose knowledge and views are confined to as small a groove as their own, than with those whose knowledge is extensive and multifarious, and whose views are broad and cosmopolitan. Nay, is it more probable that they will dislike the latter, regarding them as pedants if not as more dangerous people—people who at best are to be looked upon with suspicion, so inconsistent are superior knowledge and liberality of sentiment, in the minds of a large number, with true piety and orthodoxy.

It is true that there are educators belonging to the female Catholic orders in the United States who may justly be ranked even among the high class of which Father Early was a distinguished, though unostentatious member. But those accomplished lady instructors—to whom be all honor—although we abstain, for obvious reasons, from mentioning their names, are, also, "few and far between," and belong chiefly, if not exclusively, to two orders, those of the Visitation and the Holy Cross. Of the rest of our Catholic educators—about ninety-five out of a hundred—but little can be said. Take away the four colleges of the Christian Brothers, with the two Jesuit colleges of Georgetown and Worcester, deducting also from

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the vernacular tongue, would be much more appropriate, and we would offer such accordingly, were we not precluded by our respect, not only for the sacred edifice, but also, for the good men who formerly officiated in it, and for those who still continue to worship in it; for we may repeat again, that it is never the church, its dogmas, or its hierarchy that we criticise; only things that stick to them as excresences, or as parasites. But we must not conclude our note on the legend proposed by Erasmus without giving the following translation, so that the reader who knows as little of Greek as even Corrigan, may be able to judge whether it would not be somewhat appropriate in the present case:

> "When ulcer'd wounds the cutting steel require,
> No mystic charm the skilful leech applies."

the account the Catholic female academies of Georgetown, Mount de Chantal, Brooklyn, and Notre Dame, and there is very little left of the Catholic educational resources of the United States. Among the remainder there may be an exception or two; but even after making this liberal allowance, it would still be too true, that nine-tenths of our Catholic educational institutions, male and female, are below mediocrity, and vastly inferior, in all that is essential to true intellectual culture, to the Protestant educational institutions claiming a similar rank.

We might easily point out too many evidences of this generally low grade of Catholic education in the United States, but there is one fact so significant that it might almost be regarded as sufficient evidence by itself. Thus, far be it from us to deny that the Catholics have several journals, weeklies and monthlies, in different parts of the country, which are conducted by educated, enlightened men and women—by writers who, by their moral worth, as well as by their talents and abilities, would do credit to the press of any denomination. There is one of this character published at Boston, one at Baltimore, two at Philadelphia, and two at New York. It is almost needless to say that so far as the first class colleges and academies to which we have alluded may be said to need any organs, they avail themselves of some of these respectable journals. But which are the organs of the opposite class of educators, and educational institutions? One, by a strange contradiction of terms, is called The Freeman's Journal, and is published at New York; the other, by a contradiction equally obvious, is called The Catholic Telegraph, and is published at Cincinnati. Each of these hires itself by the week, month, quarter or year, to about a score of the sham universities, colleges, and academies, male and female, with the understanding that they are to do any sort of work, rough or smooth, clean or unclean. Although the duties thus undertaken by these worthy organs are various, they consist chiefly in the most extravagant adulation of their employers, and in the most extravagant abuse of all who venture to hint that those employers are not the learned people they pretend to be.

This adulation, as coarse and ungrammatical as it is mercenary and false, and redolent of "the liquor business," is quoted in scores of catalogues and circulars, with apparently as much faith in its efficacy as if it were a new revelation. We could give abundant specimens of this precious drug from catalogues and circulars now before us, but having no wish to give pain to those whose only sins may be their ignorance and bad taste, we prefer to allow those having sons or daughters to educate to make those discoveries for themselves.

We cannot pretend to be surprised that while those organs teem with matter of this sort—"recommendations" and "first rate notices"—we search them in vain for as much as one paragraph such as one might expect to be devoted to the memory of an educator like Father Early. It is true that we never handle one or the other except when we are called upon to examine it as a curious specimen of a "religious" illuminator and champion; and since we want, even then, to throw it aside as soon as we can, partly to avoid soiling our fingers, and partly to obviate the degrading suspicion of being numbered among its regular readers, it is possible that something has found its way into either of the twain, or into both, which we might, had we seen it, have regarded as a decent tribute to Father Early. No doubt the editor-convert, especially, has had some lucubration on the subject, since a Presbyterian turned Catholic is always in more or less danger of being accused of showing the cloven foot, if he fail to display his Catholic zeal on all proper occasions. The case of poor Bronson serves as a melancholy example of this; although we must beg Dr. Bronson's pardon for comparing him, for one moment, in any way whatever, except by way of contrast, to either of the two champions referred to.

Nay, we feel that we should apologise to all our readers for taking any notice of such parties. Our excuse is, not that they have abused us many a time without our having ever disobliged them in any way; not that they have done so as the hired bullies of sham colleges, sham universities, sham academies, billiard saloons, etc.,—precisely as we have been abused by the organs of the quack doctors, the quack

insurers, and fraudulent politicians. All this is really not the reason why we notice them, for we cordially despise their abuse, and have no objection to their devoting a column of such to us every week, cramming as many lies into it as possible. We notice them as a melancholy illustration of the degeneracy of the Catholic church in America, and of the "lower depth" to which Catholic education has fallen. At the time of the Reformation the church had its Erasmus, its Staupits, and its Bembo to give a classical tone and character to its educational institutions. She could boast of such in the poorest countries of Europe, and in those countries least enlightened, but now one of the richest and most enlightened countries in the world beholds the spectacle of its Catholic educational institutions ruled by persons like the McMasters, the Purcells, and the Corrigans!

It is almost superfluous, then, to say that it is not Georgetown College alone which has sustained an incalculable loss by the death of Father Early; his death is a loss to the cause of education in general, but especially to that of Catholic education—it is a loss, in a word, to the educational prestige of the Catholic church in America, a prestige which, as we have shown, had already fallen to a low ebb, in spite of the noble efforts of a few good men and women qualified for their task.

Not that we deny that there are competent men to take the place of the deceased President of Georgetown College. We believe Father Healy, the gentleman who occupies that position *pro tempore*, is fully qualified, although personally we know nothing of him. But an educator of the first rank, belonging to another institution, in whose judgment and integrity we have implicit faith, describes Father Healy to us as "a gentleman of rare attainments, gifted by nature and improved by culture in the first colleges of Europe," adding: "He is one of whom any society has just reason to be proud. You may safely, therefore, congratulate the students over whom he (even for the time being) presides." We do congratulate them, accordingly, but still more heartily, we confess, would we congratulate them on the appointment of

Father Clark, who did so much to elevate the character, and improve the prestige of Holy Cross College, Massachusetts, as the president of that highly respectable institution. There is yet another gentleman on whose appointment to the same important position we would congratulate the students of Georgetown—we mean Rev. Edward J. Kelly, S. J., formerly the accomplished professor of Greek and Latin at Holy Cross. But, although we have always made a broad distinction between the Baltimore provincial and the New York provincial of the Jesuits—as broad a distinction as we have made between the Jesuit College of Georgetown and the Jesuit colleges of New York and Fordham—yet we do not suppose, or expect, that our congratulations, suggestions or opinions will exercise any influence on the choice or decision of that gentleman.

We have said nothing of the loss the University of the City of New York, and the cause of higher education in general, in this country, have sustained by the death of Dr. Ferris; but it is needless for us to assure our readers that the omission has not been caused by any lack of appreciation on our part of what the venerable Chancellor has done for both. We have, however, made the omission intentionally, our reason for doing so being that when one has attained the age of seventy-four, or seventy-five, he may well be allowed to rest from his labors, even if still free from disease. But, unhappily, the kind, amiable old gentleman had long been suffering from an incurable malady, and had become so feeble that he was sometimes unable, for weeks, to leave his room. Accordingly the trustees very properly accepted his resignation, some two years ago, of the active duties of the chancellorship, so that death found him resting, but still fatigued and exhausted, from the educational labors of half a century, twenty-one years of which were devoted to the University. Thus, the end of all that was mortal of him was like that of the noble, trusty ship, which, after having performed many a voyage, and defied many a tempest, carrying the blessings of civilization wherever she went, lies at last, disabled in the harbor, partly from age, and partly from her many hard struggles with the winds and

billows, until a gust, which would have done her no harm in the vigor of her life, makes her a complete wreck.

But while none set a higher value than we on the services which the amiable and venerable Chancellor has rendered to the cause of American education, and especially to the University of the City of New York; while none more profoundly regretted the loss of those services to the youth of America, or will longer hold in affectionate remembrance the kindness and generosity of him who performed them; at the same time, none are more willing to admit that among the present faculty of that institution are men who would rank as first-class educators in any country in the world, and men who deservedly have a European fame in literature and science.

ART. VI.—1. *The Works and Correspondence of the Right Honorable Edmund Burke.* In 8 vols. London.

2. *Memoir of the Life and Character of the Right Honorable Edmund Burke:* with Specimens of his Poetry, Letters, etc. A New Edition. By JAMES PRIOR, Esq. In 2 vols. Boston.

3. *Edmund Burke; a Historical Study.* By JOHN MORLEY, B. A., Oxon. London.

4. *The Public and Domestic Life of the Right Honorable Edmund Burke.* By PETER BURKE, Esq., of the Inner Temple and the Northern Circuit. London.

5. *Maxims, Opinions, and Characters, Moral, Political, and Economical, from the Works of the Right Hon. Edmund Burke*, etc. By the late Dr. LAWRENCE. In 2 vols. London.

6. *The Life of Edmund Burke, comprehending an Impartial Account of his Literary and Political Efforts, and of his Contemporaries.* In 2 vols. By ROBERT BISSEL, LL.D. London.

SOCIETY is founded on law, natural, civil, and municipal. It is preserved and kept together by repressing evil and ad-

vancing good. It must be preserved by public virtue or penal laws. Externally, it is protected by international laws, which are sustained by the force of a nation; but internally, society is preserved by the purity of its organization, and the justice of its administration. Society, founded in a civil state, is powerless to defend its own rights, except by rule, by system, and by law. In the natural state, or condition of man, he is his own law, and he defends his rights as best he may. In that state, might makes right; but when man enters into society he abides necessarily by its rules and laws, however just or unjust, and he has no power to enforce his rights to life, liberty, and property, except by the operation of its jurisprudence. Hence society is founded, and can exist only on the principles of justice, which must lie at the foundation and permeate every civil state. As society is of ancient growth, imbedded with a code, criminal and civil, arising from the written and unwritten law, so its jurisprudence becomes complex, confused, and oftentimes incongruous; and at best its changes of the law give uncertainty in its administration. These usages are more historical than philosophical in all states, and hence the law is learned in cases as well as principles. Thus deeply does society feel the need and pressure of those usages that we call jurisprudence in every act and movement of mankind.

Doubtless there can be no solid and safe system of law, in any state, unless there is a wise and just administration of society in all its departments—legislative, executive, and judicial. It is possible that society may have one or more of these branches badly administered for a time, without deteriorating the other, but for any considerable time they must stand or fall together. This is enforced by the history of nearly every great nation, from ancient times to the present. In the early history of nations, the laws, like the wants of men, were few and simple. They are crude and general, like the customs and the legislation that produce them; but when society reaches down through many ages, it assumes a more exact, complex form of jurisprudence, and of administration. Indeed, Rome, that existed through fifteen centuries, and still

exists in her comprehensive code of laws, which in some measure is incorporated into the laws of every civilized state, and is the common law of Europe to-day, would seem to contradict the maxim that the three departments into which the civil state is divided, must stand or fall together. But without this wise legislation and executive action, the laws of Justinian would never have been reduced to a system, and Roman jurisprudence would be as little known as that of ancient Greece. The multitudinous accumulations of the Roman law would have sunk and utterly disappeared in the darkness of the middle ages, leaving some such work as that of Gaius alone* to tell us how little we could know of what had been of the most perfect civil code that had ever appeared among men. Certainly we are yet indebted to the great works of the Roman lawyers for the best lights of jurisprudence in reference to equity principles; and the great Roman jurisconsults are forever immortal where law is respected and known. Modern times have applied these principles to the affairs of men, and thus we mingle the Roman law with the modern, and thereby prove that the great principles and wants of mankind are universal. Still, with all this knowledge of the civil law, we have but an indistinct and faint glimpse of the constitution of Rome and other ancient states. Indeed, we have but glimpses and fragments of the constitutions which flourished for many centuries, and then disappeared before the dawn of modern civilization and the rise of new states.

Thus the study of the laws and the consequent formation of constitutions in modern times are needed in the jurist and statesman, that we may comprehend the philosophy and the reason of the changes that come to every state. More comprehensively we must study the spirit of the laws and the tendency of those constitutions through many centuries in order to determine their real character and force. In this manner we can determine the progress of society and estimate the value of its institutions. But if we limit our observation to a short period we get only a glimpse of society and the work-

* *Institutiones.*

ings of a state; and hence the need of comprehensive study of every society to determine its character and improvements. By this long study of systems we are enabled to detect their vices and virtues; and in the pages of Montesquieu and Aristotle, as well as in Machavelli and Vico, we see this wide and comprehensive survey of institutions and society. Indeed, we get glimpses and fragments of those studies, though short and concise, in the philosophy of Locke and Bacon. But here we are surveying the field of philosophy where great and wise men have lighted our way dipassionately to the highest truths. They are the philosophers that come after and not the mighty actors that produce and settle those conflicts and revolutions in states; and hence they calmly survey the history of nations and pronounce judgment, assigning the causes of those great conflicts. For this reason, the study of the philosophers must go hand in hand with the history of nations, and the movement of political events.

But the statesman, in the midst of the conflict, is acting and making history, and he cannot thus take so calm a survey as he who looks back a century upon past revolutions. In this view we must study the life and genius of Edmund Burke, for he was mainly an actor in revolutions. At least his most valuable writings were produced by the American and French revolutions, and his Reflections upon the "French Revolution" were published in the second year of that event, anticipating what would be rather than what had taken place in France and Europe. Thus, this work is quite unlike most of the productions of the human mind, and of course did not realize all it foretold. Suffice to say, it is in the main written with prudence and soberness of language, when we consider the dangers the author descried and foretold. We are now looking at Burke's philosophy and the scope of his great argument—the mightiest production against the principles of the French Revolution that ever appeared. We may concisely say that the principles that he combated in the sermon of Dr. Price may have been dangerous to the *fixed* constitution of England; yet, after the lapse of a century, these principles enunciated by Dr. Price are primordial laws in every

free state of the world. Indeed, we may say that governments no longer exist for the benefit of kings and an aristocracy; but for the benefit of nations and of men. We can even prove from Burke that he had no love for those classes, and we may say that no statesman of any time more opposed oppression and arbitrary power down to the French Revolution. Even then he said:

"I flatter myself that I love a manly, moral, regulated liberty as well as any gentleman of that (revolutionary) society, be he who he will; and perhaps I have given as good proofs of that cause in the whole course of my conduct. I think I envy liberty as little as they do to any other nation." * * * "When I see the spirit of liberty in action, I see a strong principle at work; and this for awhile is all I can possibly know of it. The wild gas, the fixed air is plainly broke loose; but we ought to suspend our judgment until the first effervescence is a little subsided, till the liquor is cleared, and until we see something deeper than the agitation of a troubled and frothy surface. I must be tolerably sure before I venture publicly to congratulate men upon a blessing that they have really received one." * * * "I should, therefore, suspend my congratulations on the new liberty of France until I was informed how it had been combined with government; with public force; with the discipline and obedience of armies; with the collection of an effective and well-distributed revenue; with morality and religion; with the solidity of property; with peace and order; with civil and social manner. And, all these, in their way, are good things, too; and, without them, liberty is not a benefit while it lasts, and is not likely to continue long." * * * "I set out with the proceedings of the Revolutionary Society; but I shall not confine myself to them. Is it possible I should? It looks to me as if I were in a great crisis, not of the affairs of France alone, but of all Europe. All circumstances, taken together, the French Revolution is the most astonishing that has hitherto happened in the world."

This passage is a key note to the work, and is a forecast of the actual events that soon came on France. Burke saw liberty in action, and that it was a great crisis, not in France alone but of all Europe. He then proceeded to show that the crisis was based on false principles, dangerous to liberty, to order, to property, and the institutions of France. He took a clear and comprehensive view of the actual danger, and the calamities that would attend this people in their mighty struggle for liberty and reform. Burke did not, in his usual

masterly way, unfold the causes that led to this crisis, nor did he gather up the actual grievances of the people who were now throwing off an effete and arbitrary system of government that weighed them down like an incubus. He knew French history, and he skilfully depicted the crisis and its inevitable disasters to forewarn and forearm England against the spread of French principles. Indeed, so judiciously was this work presented that there is nothing historical to refute, nothing but his speculations and his principles against which we can contend. And here we must call in question his fundamental postulates antagonistic to those of Dr. Price and the Revolutionary Society, which seemed to have filled him with alarm if not with indignation against these simple principles, those laid down in that celebrated sermon. Dr. Price claimed that the people of England, by the principles of her Revolution, had acquired a right:

1st. To choose their own government.
2d. To cashier government for misconduct.
3d. To frame a government for themselves.

Burke says:

"This new and unheard of bill of rights, though made in the name of the whole people, belongs to these gentlemen only. The body of the people of England have no share in it. They utterly disclaim it. They will resist the practical assertion of it with their lives and fortunes. They are bound to do so by the laws of their country, made at the time of that very revolution, which is appealed to in favor of the fictitious rights claimed by the society *which abuses its name.* * * *

"We must recall their erring fancies to the acts of the Revolution, which we reverse, for the discovery of its true principles. If the principles of the Revolution of 1688 are anywhere to be found, it is in the statute called the Declaration of Rights. In that most wise, sober, and considerate declaration, drawn up by the great lawyers and great statesmen, and not by warm and inexperienced enthusiasts, not one word is said, nor one suggestion made, of a general right 'to choose our own governors; to cashier them for misconduct; and to form a government for ourselves.'

"This Declaration of Right (the act of the first of William and Mary, sess. 2, ch. 2.) *is the corner stone* of our constitution, as reinforced, explained, improved, and its fundamental principles forever settled. It is called 'An act for declaring the rights and liberties of the subject,

and for settling the succession of the crown.' You will observe, that these rights and this succession are declared in one body, and bound indissolubly together."

Burke refers to the prospect afterwards of a total failure of issue from King William and Queen Anne. The consideration of this settlement of the crown again came before parliament, indicating with more precision the persons who were to inherit in the Protestant line, and they declared that the succession in that Protestant line drawn from James the First was absolutely necessary "for the peace, quiet, and security of the realm," and that it was especially urgent on them "to maintain a certainty in the succession thereof, to which the subjects may safely have recourse for their protection." Burke then declares "both these acts, in which are heard the unerring, unambiguous oracles of revolutionary policy, instead of countenancing the delusive, gypsy predictions of a right to choose our governors, prove to a demonstration how totally adverse the wisdom of the nation was from turning *a case of necessity into a rule of law.*"

Before considering the act of settlement of crown succession, drawn by the penetrating pen of Somers, we might just allude to the act of 1788, defining whether the heir apparent was the legal successor during the insanity of George III., or whether he was to act under a regent. Fox, and the opposition, contended that under the law he must for the time become king; but Pitt, and parliament, held that he could only act under the direction of a Regency established by the legislature, so we have this declaration defining the succession of the crown in such an exigency.

This turning a case of necessity into a rule of law is not maintainable, except when the same necessity sustains the rule in the like case. If the men of 1688 could turn a case of necessity into a rule of law, regulating and limiting the succession of the crown, a like recurring necessity may also change the succession of the crown. The sole perversion would be to disturb the fixed law of succession when the crown had done nothing to forfeit its hereditary rights. If Burke maintained that under no circumstances could there be a defeasance of

the crown, he contradicted the act of 1688, which declared that "King James the Second having abdicated the government, and the throne being thereby vacant, his Highness, the Prince of Orange (whom it hath pleased Almighty God to make the glorious instrument of delivering this kingdom from popery and arbitrary power), did cause letters to be issued to the lords, spiritual, temporal, counties, cities, universities, boroughs and cinque-ports for the choosing of such persons to represent them as were of right to be sent to parliament to meet and sit at Westminster, upon the two and twenty-second day of January, in this year 1688, in order to make such an establishment as that their religion, laws and liberties might not again be in danger of being subverted; upon which letters, elections having been accordingly made," etc. Then being in parliament assembled, in full and free representation of the nation after the manner of their ancestors, and taking into consideration the best means for vindicating and asserting their ancient rights and liberties, they did declare: 1. That the pretended power of suspending of laws, or the execution of laws, by regal authority, as it hath been assumed and exercised of late, is illegal. 4. That levying money for, or to the use of the crown, by pretence of prerogative, without grant of parliament, for longer time, or in other manner, than the same is or shall be granted, is illegal, and after thirteen enumerations of rights they do claim and insist that these are the undoubted rights and liberties of the people of England, and that they were not to be hereafter drawn in question, and to which they are particularly encouraged by the declaration of his Highness, the Prince of Orange, as being the only means for obtaining a full redress and remedy therein.

So the Bill of Rights does not admit that the crown was forfeited, or that a breach and violation of this bill would work the forfeiture of the crown. Burke is entirely right as to the act of William and Mary; but it was historically true that the regular succession had been broken by the dereliction of the receding king and his culpable conduct in English opinion. It is also clear that a "new sovereign had been thus raised to the throne for the sake of those liberties by violating

which his predecessor had forfeited it." And thus William III. was an elective king raised by means of a convention of a new parliament of the people of England; and this Bill of Rights was afterwards confirmed by a regular act of the legislature which establishes the limitation of the crown that "all persons who shall hold communication with the church of Rome, or shall marry a papist, shall be excluded and forever incapable to possess, inherit or enjoy the crown and government of this realm; and in all such cases, the people of these realms shall be absolved from their allegiance, and the crown shall descend to the next heir." Hallam says that this was as near an approach to a generalization of a principle of resistance as could be admitted with any security for public order. So this bill forfeited the crown to the next heir when any one should be so rash as to hold communication with Rome, or who should marry a papist; and this result was to secure the peace and tranquility of England; and for a like reason the utter disregard of the Bill of Rights in this regard on the part of the crown should work a like forfeiture in the succession. Had that principle been embraced as to the violation of rights declared, no more kings of England would have given occasion to the declaration of parliament in 1788, that the "influence of the crown had been increasing, was increasing, and ought to be diminished." Burke himself supported this principle, so finely drawn by that great lawyer of the age, Dunning.

But it is not the language of the act which must control when we get at the fact that the king was elected and confirmed in his title by the people and parliament. So, then, we may finally say that the English crown, in its title, still rests on an act of parliament, and though the constitution of England does limit the crown, yet there are no acts that defeat the succession or work a forfeiture because of the violation of the political liberties of England. The English have always avoided abstractions and general principles when they could rest their rights on the historic base. In nothing are they more unlike the French than in this respect. The French follow their principles to a logical conclusion, or at least reduce them to a generalization. With them it is liberty,

equality and fraternity. What a havoc this would make in England, where inequality of law and civil condition still remain in greater force than in any great state, not excepting Germany and Russia. These inequalities in the law have the force of proscription, but under the wise impulse of the age they are constantly yielding to reform. Englishmen stand by their charters, and find themselves, in the nineteenth century, drifting, in spite of proscription and Tory stagnation.

Burke, in an address to the king, praying him to conciliate the Americans first, and, if need be, to rely upon force afterwards, used this significant language: "Sir, your throne cannot stand secure upon the principles of unconditional submission and passive obedience; on powers exercised without the concurrence of the people to be governed; on acts made in defiance of their prejudices and habits; on acquiescence procured by foreign mercenary troops, and secured by standing armies. These may possibly be the foundation of other thrones; *they must be the subversion of yours.* It is not to passive principles in our ancestors that we owe the honor of appearing before a sovereign who cannot feel that he is a prince without knowing that we ought to be free. The revolution is a departure from the ancient course of the descent of this monarchy. The people, at that time, *re-entered into their original rights;* and it was not because a positive law authorized what was then done, but because the freedom and safety of the subject, the origin and cause of all laws, required a proceeding paramount and superior to them. At that ever memorable and instructive period the letter of the law was superseded in favor of the substance of liberty. To the free choice, therefore, of the *people*, without either king or parliament, we owe that happy establishment out of which both king and parliament were *regenerated.* From that great principle of liberty have originated the statutes confirming and ratifying the establishment from which your majesty derives your right to rule over us. Those statutes have not given us our liberty; our liberties have produced them. Every hour of your majesty's reign your title stands upon the very

same foundation on which it was at first laid; and we do not know a better on which it can possibly be placed."

Such was the language of the address to George III. drawn by Burke, and here we may leave forever the just interpretation of English liberty, and the title on which the crown of England stands and forever depends. And here we may add, if Englishmen could, in 1688, relay and reassert the foundation of their liberty, so had France a similar right, a hundred years later, to consult in what way her peace and tranquility could be subverted. France had thus the right, based on original principles of liberty and society, to cashier her king and choose her own government anew. At least, we think Burke's address sustains all that Englishmen can claim as derivable from the act of settlement of 1688; but there remains the unquestionable right of revolution in every state sustained by Locke and Milton, and the people of England, in many contests for their undoubted rights.

We have shown that the rights of men exist and have force before they become citizens of any state, and which they enter for the purpose of securing these natural rights. In the ramifications of society these rights are modified, refracted; but whenever the state subverts these ends of all just government, then the right of the people to redress and overthrow the government by force exists, and may be resorted to to recover their liberty. Burke says, "as to the share of power, authority and direction which each individual ought to have in the management of the state, that I must deny to be amongst the *direct*, original rights of man in civil society; for I have in my contemplation the civil social man, and no other. It is a thing to be settled by convention. If civil society be the offspring of convention, the convention must be its law. That convention must limit and modify all the descriptions of constitution which are formed under it. * * * They can have no being in any other state of things; and how can any man claim under the conventions of civil society rights which are absolutely repugnant to it?"

There is no answer to this, except we assert that society exists for the good of its members, and whenever it subordi-

nates the original rights of men and establishes its arbitrary and unjust power over them, they may throw off that society and establish new forms of government to secure their rights.

Burke says that "if civil society be made for the advantage of man, all the advantages for which it is made become his right. It is an institution of beneficence, and law itself is only beneficence acting by rule. Men have a right to live by that rule; they have a right to justice; as between their fellows, whether their fellows are in politic function or in ordinary occupations. They have a right to the fruits of their industry, and to the means of making their industry fruitful. They have a right to the acquisitions of their parents; to the nourishment and improvement of their offspring; to instruction in life, and to consolation in death. Whatever each man can separately do, without trespassing upon others, he has a right to do for himself; and he has a right to a fair portion of all which society, with all its combinations of skill and force, can do in his favor."

Such are the rights of man in society, granted by Burke in his "Reflections"; and we may add, first and above all, he has a right to life, liberty and property. These embrace security and freedom to man, freedom of action and of thought. Society cannot reduce him to slavery. Society can never have a right to do injustice; for justice is the life and spirit of all government in the world. Of course, this is the principle on which all society must stand or fall, and on these rights of man France, in 1789, had an undoubted right to regenerate herself. Burke says that "government is a contrivance of human wisdom to provide for human wants. Men have a right that these wants should be provided for by this wisdom." Let us then see the condition of France at this time, and the wants of man in that ancient state. There was great inequality of taxation, exempting two-thirds—the landed property held by the church and the *noblesse*. The *taille* was levied on the property and not on the proprietor, and so some properties originally possessed by nobles were purchased by *roturiers*, who thus inherited the exemptions, and became privileged from taxation. When the *noblesse*

purchased lands of plebian origin they took them subject to taxation. In France the feudal system remained, the claims of lord and vassal still existed and survived in full force. In France the *seigneur*, while asserting the most onerous rights over the cultivator of the soil, did nothing in return. His demands assumed the form of unwarranted, hateful exactions; they resembled the worst sort of tithes—those levied by a clergy of a different creed. They assumed a worse form, for they were no longer levied on his own tenants or vassals, but on the owners of land. The French peasant had been long a proprietor of land; he had bought his estate or inherited from his forefathers; and he held it in fee simple; and yet he was daily called upon to satisfy rates and demands made by those no longer his master; who did nothing for him, and whose exemption from taxation made his own taxation the heavier; and thus he regarded him as a privileged extortioner. The *corvée* still existed, and he was obliged to leave his own land to labor for many days on the farm of the noble without recompense. He payed tolls on the seigneur's roads, and others to keep them in repair. The seigneur likewise levied dues on all fairs and markets. He alone might hunt and shoot, and keep pigeons, which fed on the peasant's corn. The peasant was compelled to send his wheat to be ground at the lord's mill, and his grapes to be pressed at the lord's *pressoir*. He could not buy nor sell an acre of land without paying a fine to this invisible but omnipresent lord. These things were but a part of the oppressions of one party and the exactions of the other. Had the cultivator been a tenant he scarcely would have felt them; they would have been a part of his rent; and had the lord been his master they would have been a sort of homage cheerfully paid for a certain protection, and thus the lord was in every sense to him an extortioner.

In the words of M. de Tocqueville's "France before the Revolution," "they sell him the right to sell his own produce, and he cannot touch it till he has ground it at the mill and, baked it at the bakehouse of these same men. Whatever he does, these troublesome neighbors are everywhere on his path

to disturb his happiness, to interfere with his labor, to consume his profits; and when these are dismissed, others in the black garb present themselves to carry off the clearest profits of his harvest. Picture to yourself the condition, the wants, the character, the passions of this man, and compute, if you are able, the stores of hatred and of envy which are accumulated in his heart" (p. 54).

This French peasant found relief from these grievances in the utter demolition of feudalism. The French Revolution did accomplish something for him; and it also removed personal grievances equally destructive to liberty and to the happiness of France. Indeed, we have no wish to say more about the rights of the laborer and the remedies to be applied to his relief. Amelioration came at great expense to France, but it was caused by centuries of cruelties and oppressions. Reform had been long in vogue before the Revolution, and Louis XVI. was one of the best of kings. It was his misfortune to suffer and perish for the crimes of his ancestors, of the *noblesse*, the church, and his own vaccilations. But he was not the only man in France that deserved our sympathy for the wrongs they endured, and who were sufficiently elevated to command the noble indignation of Edmund Burke.

But the errors of Burke in the French Revolution were the errors of the age, when the oppressions of the people were in a degree unknown and unfelt outside of France. The exactions of the rich upon the poor had not been exposed until the Revolution broke out in 1789, and made bare the odious demarcations existing in French society. Burke's "Reflections" produced an immense reaction in England against the Revolution, and finally influenced in a large measure the war of monarchs to restore the Bourbons in France. So much were they misled that they conceived that France had no rights of a nation to self-government, and Edmund Burke was the great writer of retrogression. He certainly spent his last days sincerely, as he thought, for the interest of England and other states, in exposing the delusions of the French nation in the establishment of a free government. If we look at the immediate results of that Revolution, we might conclude that

Burke was quite right in his war against it, but if we judge that event by the lapse of three-fourths of a century, we must pronounce that revolution beneficent to the world. It has taught that if governments would avert civil convulsions in states there must be justice among men; it has taught that a people, though long-suffering, have rights that kings must respect; it has taught that a people will rise after long oppression; it has taught that a blind aristocracy must perish where they will not yield to reform; it has taught that justice long deferred will sooner or later overtake every people; it has taught the principles of liberty, equality, fraternity to all men; and these principles are permeating every civilized state, and teaching in every civil convulsion the indisputable rights of man to govern himself. Failures may come as they have come, but this tendency to renovate and reform is a law of the nineteenth century. We now gather in of that harvest sown a century ago in the revolutions of France and America; and the men of that time drew their principles from former times and other examples, and so events in this age all tend to obliterate the past and found governments on the rights of men. Certainly, then, Burke was the last great writer that gave his genius to retard reform. The age and the century that closed upon his great works have been too strong for even him, and he, thus overborne, but lives to instruct and give us lessons of human prudence.

Burke had given a lifetime to resist the oppressions of the British government in America and India. So far he had proved himself one of the most disinterested statesmen and philanthropists of the world, for he gave half his life to a people he had never seen, and from whom he had nothing to expect but the common gratitude of men. Thus high and pure was the character of Edmund Burke, when the French Revolution left him on disputable ground, where his fame as a patriot has long been questioned.

If the works of a man can attest his faith, his integrity, there can be no question that he was never more in earnest in all his distinguished career, and, however much we may dispute some of the fundamental principles of that masterly work, yet we

regard it as the most extraordinary production of that age, and we read it for its great truths and copious eloquence. We have read it almost as often as we study the poets, and shall always recall it to memory by a fresh reading in connection with the other works of Edmund Burke.

Perhaps Burke, with all his powers of generalization and disquisition, was the greatest practical statesman of his time. He regarded statesmanship as called upon to meet events, and not to spin fine abstractions on government. This was fully displayed in his speeches on the American war, for he refused as a statesman to even debate the right of Great Britain to tax the colonies, and held that it was inexpedient, and, therefore, unjust. He kept in view the rights of the mother country, and never acceded to the proposition that parliament was not supreme over the colonies; but he contended that new powers should not be asserted and exercised. His speeches on American taxation and conciliation are enduring monuments to the greatness of Edmund Burke, and America will forever cherish his fame as dear to her as that which clings around the patriots of her own Revolution. We fully see that the policy of Chatham, Burke and Fox could have saved the British empire in America, and would, for the time, have delayed dismemberment. We cannot agree with Mr. Webster's remark, in the address before the historical society of New York, that England is stronger and richer at this moment than if she had listened to the unheeded words of her great statesmen; and, he adds, that neither nations nor individuals always foresee that which their own interest and happiness require. Suffice it that England and her colonies would have maintained her supremacy so long as she could have kept them in her grasp, for immigration and commerce would have strengthened England at home, and had not France or England lost their American colonies, it might have even averted or at least delayed the revolution in France. France first gave symptoms of discontent in consequence of the revenues of the government falling some few thousands of francs short of her annual expenditures. This deficit was produced by the war debts of the last few years about Prussia and

Canada, and by the aid she gave the United States for their independence. So these wars precipitated and brought on to some extent the struggle in France in 1789, which only ended in 1815, after devastating all Europe. Had England remained strong on land as on the ocean until this time she would probably have kept France in tranquility for a quarter of a century at least. Sure we are that the situation of the colonies would have been beneficial to England, and when she discovered their strength she would have gradually yielded her arbitrary rule over them. But these speculations are vain, for it is not certain what other events might have thereby happened in the world.

For many years Edmund Burke studied the history of British India, and how parliament could impeach Warren Hastings, a great culprit and governor general of India. His works show how he labored with Fox, Sheridan, Earl Grey, and Sir Philip Francis to punish this great extortioner. After many years of labor and a new house of lords had appeared, it was seen that it was for the interest of England to acquit Warren Hastings, as his extortions had been made mainly to enrich a great corporation which had been created by parliament to rule over India. He was acquitted accordingly; but the accusing voice of history pronounces him, nevertheless, guilty of great crimes, as charged by Edmund Burke. And the speeches of the latter will forever condemn Warren Hastings in the mind of the world; and this impeachment has rescued India from her oppressors, and given to it law and comparatively good government. So a momentary defeat is turned to a lasting triumph for those who arraigned and impeached this governor-general of East India. Thus the course of Fox, Sheridan, and Burke is forever vindicated by the history of India.

Such was the power and such the supremacy of Edmund Burke in the government of England, though he never held any place in the administration higher than that of an under secretary, and this he held only for a brief period. He reigned in parliament, and led the whigs during the American war until he took a subordinate place, and left Fox the place he relinquished. Chatham resigned his great office in consequence of

his long illness, and Burke and Fox in succession took the lead among the whigs. It is no doubt true that Burke led in great measures, during his whole career, rather than men and party. Indeed, both Burke and Fox were not men of plastic expediency, nor were they careful to gauge public opinion. They both maintained the right, regardless of consequences to themselves. This is indicated by their course in connection with America, when Fox even said publicly during the American war, that it was rebels to whom they owed the best part of the British constitution; and he and Burke dividing on the foreign affairs of France broke up and destroyed their party. No English statesmen of this age would feel called upon to rupture his party and his friendship of a lifetime as did Burke and Fox, because of the overthrow of some dynasty in a foreign government like France. The fall of Napoleon and of Thiers and the intrigues of the Orleans princes hardly affect the bourse in Paris, or the exchanges in England.

We shall dwell no further on the events connected with the life of Edmund Burke, for they are known wherever the language is spoken; in every quarter of the world. In his own age he soon took his place among the great writers of England, and held it for forty years. He went to parliament at the age of thirty-five, and remained in public life over thirty years. He saw the demise of Chatham, and the rise of Chatham's great son, to dispute his own supremacy and that of Charles James Fox. He was in parliament, and saw the dawn of American independence, and the dismemberment of the British Empire. He saw Dr. Franklin insulted in a British parliament, and he saw him, not long after, the embassador of the colonies to receive the acknowledgment of their independence from the same obstinate king. In his day he was the associate of Dr. Johnson, Goldsmith, Reynolds, Garrick, and the great historians of that age; for he equalled them in fame as an author; and stood first among the distinguished statesmen of that age. His works have come down to us, and will enlighten and instruct future ages. No matter how men differed about his public life, his fame is secure, for he is one of the classics of the language, and one of the wisest teachers

of men. He has influenced the opinion of the world. Indeed, however much Johnson impressed the literature of his time, we cannot doubt but Burke is more read at the end of a century, and has in his style more influenced the literature of modern times. Perhaps there is no statesman since Cicero, who has had such sway over politics as Burke. His speeches and his writings are full of wisdom and profound thought. Most orators have little interest except on the subject they debate, but Burke, in his excursions and in the richness of his mind, overspread all his subjects with leaves of gold. His style is not as severely Attic and senatorial as that of Fox, or Demosthenes. He enriched his subject like Cicero; and more astonished us by the grandeur and comprehensiveness of his thought than by the magnificence of his rhetoric. His thoughts moved along, full, flowing, and oftentimes overwhelming, like the waters of a great river. He seemed the Nile in copious eloquence—not gaudy, but rich, easy and strong, is the character of his unapproachable writings and eloquence. He had the temperament of a great orator, but he had not the delivery that bears absolute sway in an English parliament, which was swayed by the inspirations of Fox and Chatham. His occasional loss of temper, lessened his influence in his later days, when it was for the interest of the India gang, or the Foxites to hamper and call to order this great man. He "spoke too long and too often" when he first entered parliament. But Fox spoke for five years, and never missed but one night of debate, and grew to be the most brilliant and accomplished debater of any time. Burke, with all his learning, and genius, wanted Fox's tact. Thus Burke, as a speaker and debater, was less effective than many inferior men of his own time, although he had more sway and influence than any statesman of that age, after Chatham, Pitt, and Fox. In range of subject, and richness of matter he surpassed every orator that ever spoke in parliament since Lord Bolingbroke; and Lord Chatham, alone, had claims to eloquence comparable to Burke, and his fragments leave it in doubt whether he had such copious eloquence and great thought. Chatham, of course, had greater party power, and his leadership of party gives great weight to what any orator may utter in debate.

Edmund Burke had a comprehensive understanding and imagination, and in his ample mind he held all the material he had gathered up in the past twenty years, and he poured out in consecutive order all his great knowledge in those nine days that he opened the great trial of impeachment against Hastings. This was a stretch of the human mind, and it proves the grandeur of the genius of Edmund Burke. Such exhibitions of power were only parallel to his indefatigable industry in the preparation. He was fired with a holy indignation against Warren Hastings, and had he lived he had purposed to write the history of this great trial. Burke's attainments in general learning were wide and almost boundless; he always sunk the lead as he explored his way, going to the bottom of every subject. His knowledge of America, and the history of the colonies, astonished parliament; and whatever subject he investigated he was equally exact and thorough. In classical studies, in modern languages and history of nations, Charles James Fox was unsurpassed in that age; and yet he said that he had learned more from Edmund Burke than from all other sources during the years of their friendship.

Fox and Pitt surpassed Burke in the direction of affairs, and in the order of parliamentary debate, but it must be also remembered that they entered parliament much earlier, and belonged to great families, while Burke was of Dublin birth, and a son of a mere attorney. That was, and is yet, an advantage in England that quite makes a man's fortune. Suffice it that Burke, when in the Rockinham University, showed great skill and power of leadership, though he held a subordinate position. We think, however, that Burke's genius lay in devising measures and the fecundity of his advocacy. He was really too great, elevated, and independent to be a mere successful party leader. His mind was too abundant for the comprehension of country squires, and the insular lord of England; and his genius was recognized by such rising men as Erskine, and by Mackintosh who became a convert to his immeasurable influence, though he had at the outset written a noble paper in answer to the "Reflections on the French Revolution." Had Mackintosh lived some years later he might have returned

to his first opinions upon that revolution. Certainly that answer is one of the best of the political essays that ever appeared in England; and it will forever endear men of liberal views to the name of its great author; for Mackintosh came nearer to Burke in the breadth of his philosophy and attainments, than any other man of the succeeding age.

Such was the influence of Burke that he always had the most distinguished advocates and statesmen among his devoted disciples. We do not claim that he had so penetrating a genius as Bacon, or so masterly an understanding. He had not Bacon's insight in philosophy, yet he certainly stands next to him in genius and in the powers of a great writer. He had not the strong wings of Milton, and never rose as high; but he took an imperial flight on a more even level. One was a sublime poet and the grandest character of his century, while the other only constructed majestic prose. Burke's letter to a noble lord embraces a sentence about pickaxes of the low Bedford Level, which a great living writer said to us, "it is, in my opinion, the finest sentence in English prose;" but we should place Milton's, where he describes "a noble and persistent nation rousing herself like a strong man after sleep and shaking her invincible locks," first, and more sublime. Burke has a finer structure, but inferior thought. It is not so noble a trope; not so majestic a figure. Indeed, we can find one or two sentences in Webster nearly equal to Burke's in structure, though we cannot find in the language so effective a description of honor as that of Hyder Ally; nor so sympathetic a passage as that on the fall of the Queen of France. Such were the exquisite honors of Burke that he described with the skill of the historian, and in his eloquence he touched the reason and every cord of the human heart. When we thus consider his powers of mind, we see why the great American lawyer, Rufus Choate, placed Burke as one of the first four great writers of the language. They stand said Choate, Shakespeare, Bacon, Milton, and Burke, and there on that elevated plain of mighty genius we leave him.

If we turn from the qualities of his mind to the man, we see genius and virtue happily united in the grand form of Edmund Burke. Courtesy, gentleness, enthusiasm, and mod-

esty, characterized his deportment; morality, integrity, and in flexible devotion to the interests of mankind formed his unbend ing and most sterling character. He aided the feeble, cheered on and welcomed to his home struggling genius, and gave them of his means, always slender as they were; and in his character of a public man, he cut down extravagance, lopped off the excrescences of the treasury and the state, and demanded that the guilty should not go unpunished. He led economical reform in the administration of the government to the diminution of his own salary; and left a character as irreproachable and pure as that of Lord Chatham. His urbanity of demeanor in domestic life contrasted with the recklessness of Fox and the negative virtues of Wm. Pitt. Thus we find Edmund Burke possessing all those essential qualities of noble worth and boundless knowledge which Cicero declared to be necessary to the perfect orator; thus we find him taking a great part in the world, and enlightening mankind with his copious eloquence and his unapproachable writings, which are destined to live with civilization and spread with the language in which he wrote. Without praise, we may say that he is our modern Cicero in the influence he has exerted and will exert in the great republic of letters; he only wanting that universal language in which Cicero spoke, to give himself perennial reign.

ART. VII.—1. *Opuscules Physiques et Chimiques.* Par M. LAVOISIER, de l'Académie Royale de Sciences. Paris: 1744.

2 *Rapport Annual sur les Progres des Sciences Physiques et Chimiques.* Par M. BARZELIUS. Paris. 1841.

3. *A History of Chemical Theory, from the age of Lavoisier to the present time.* By AD. WURTZ, Membre de l'Institut. Translated by HENRY WATTS, B.A., F.R.S. London. 1869.

4. *First Principles of Chemical Philosophy.* By JOSIAH P. COOKE. Cambridge. 1868.

THIS is not alone the age of discovery. It is the age of change—of revolution. Nothing is fixed. All things are

mutable, unsteady. The earth itself, once accepted as the fixed centre of the universe, is now known to be an endless wanderer, blown like a leaf by the winds of destiny throughout space. It has its diurnal, its annual, its epocal revolutions, its orbital changes, its polar shiftings, its daily tides in the ocean, matched by millenial tides in the solid rocks. If our globe has proved thus unstable, we cannot look for any special fixity in the evolutions of nature upon its surface, or rather in our conceptions of these evolutions. In fact, our successive discoveries of the mutations of the earth are significant of the whole progress of physical and mental science. Everywhere the old landmarks are giving way before the waves of the ocean of discovery, shifting, sinking in the quicksands of time. New ideas and theories rise upon the ruins of the old. Life is found intruding upon the empire of death. Endless activity stirs at the heart of the most rigid substances. Solidity itself is an exploded term. The densest material is a congeries of pores and vibrating atoms. All the forces of matter are simply motions affecting its particles.

But speculation has not been content to rest here. The axe has been applied to the very root of the tree of the visible universe. The existence of matter itself has been denied. The utmost that will be granted is the existence of immaterial centres of force. Nothing but force and motion—such is Professor Faraday's ultimatum. We might go yet deeper, descending into the cloudland of metaphysics. Here we find not only matter, but mind, reeling and passing away before our eyes. The strictest realist will tell us that things are not as we see them, that most of the so-called attributes of matter arise from the action of etherial vibrations upon our nerves. The mild idealist declares that we are only aware of mental impressions, and denies that there is any exterior universe, unless it be one of ideas. Others slaughter even mental existence, and declare that nothing can be proved to really exist beyond the limits of a single mind, and this mind but a congeries of thoughts; space, time, matter, motion, force: all these forming but a strange compound of inter-related ideas.

But, avoiding all ground so lost in mist and vapor, all

arguments from such shadowy premises, there has been sufficient mutation within the circle of the positive sciences to engage our earnest attention. In this epoch of mental activity the theories and hypotheses of old reasoners have proved as unstable as the beliefs on which they were founded. All civilized nations in our days abound in philosophers, who, with the steady persistence of ants, are removing grain by grain the foundations of old systems, and laying new and more firmly-built foundations further down the path of time.

[The above introductory remarks are a pretty fair specimen of the manner in which the good people of the present day prove their own vast superiority to their ancestors, not only of remote ages but of all past ages. We do not regard self-conceit and vanity as things which ought to be fostered; nor do we wish to create any other "sensation" than such as may be created by sober facts and truth. We are therefore opposed to views of this kind. The truth is that things are no more "mutable," or "unsteady," now than they were thousands of years ago. No such discovery has been made in our time, or at any other time, as that the earth is an "endless wanderer," etc., since a body performing its revolutions in accordance with immutable laws cannot be regarded as a wanderer; still less can it be regarded as "blown like a leaf by the winds of destiny," or any other winds. In short, we may as well admit at the outset, that we suspect our present contributor has obtained his scientific maxims from the "Faculty of the Department of Science" of the University of Pennsylvania, and we think that most of our scientific readers will take a similar view of his case when informed that it was the same writer who made the astounding announcement in an article in our last number, entitled "The Sun and its Phenomena," that "a pound weight at its (the sun's) surface would weigh 14½ tons while a man would weigh about 20,000 tons."*

* Justice requires, however, that we present his explanation to our readers Replying to a letter in which we express suprise and regret that he shoul have made so absurd a statement, he proceeds:

"In reard to the error you point out in my article on the Sun, I acknowledge

To many readers the question would naturally suggest itself here, Why publish articles containing such statements? This seems just and logical; but we do not forget that some of the most eminent scientific men, and even discoverers, have committed the most egregious and ludicrous blunders in their most valuable dissertations. We also bear testimony, most cheerfully, to the fact that the perpetrator of the blunders to which we now more particularly allude is a writer of considerable ability, and one by no means averse to research and investigation. Nay more, his article on the Sun is a well written paper—notwithstanding one or two rather ludicrous errors which it contains. And the same will be found true of the article the introduction to which has elicited these remarks.

The editor of a periodical has much more winnowing to do than is generally supposed. While he has many other labors to perform, each sufficiently exacting, he cannot expect to be always successful in excluding all the chaff from the wheat. The best he can do, when he fails, is to repeat the winnowing process; and if he find that wheat grown in particular regions has such an excess of chaff in it as to render it impossible for him to prepare it fully for the mill, his only remedy is not to purchase any more of that particular brand until it has been fully winnowed by some one who has more time to perform the operation than he himself can afford to devote to it. To this we need hardly add that our rather enthusiastic friend is

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great carelessness, and am sorry to have made a wrong statement in the pages of the Review, through haste in writing. My carelessness consists, not in having made an absolutely incorrect statement, but in omitting the necessary qualifying clause, and also in writing 14½ where I should have written 140½.

"I intended to say that if the sun was condensed to the volume of the earth, with its present mass, a pound at its surface would weigh 140½ tons, and a man 20,000 tons. This statement would have been correct, but it is very incorrect as I have written it. I have no excuse to offer for my carelessness except that I will try to be more careful in future."

We think it will be generally admitted that any one who will not write on a scientific subject otherwise than with "great carelessness" should abstain from such writing altogether. If "haste in writing" is not another name for "great carelessness," it is at least as lame an excuse, and does as little credit to one who undertakes to instruct an enlightened public in the mysteries of astronomical phenomena.—Ed.

not the astronomer of the National Quarterly, his paper on the Sun being his first, and probably his last contribution to us on that science. Nor is he our chemist; although he gives a very excellent sketch of the progress of that science in the article for which the above remarks of his are intended as an introduction. His forte, however, is neither astronomy nor chemistry, nor, perhaps, any of the *exact* sciences; but that there are few better or more accurate ethnologists or more conscientious investigators of ancient history we can bear emphatic testimony.

But we have another observation or two to make on the introduction before we present to our readers the body of the article. The first is, that there is not one of the various theories which it claims to be the original work of the present generation that had not been fully and profoundly discussed by the Greek philosophers of the times of Pythagoras, Socrates and Epicurus. This is true, for example, of the atomic theory, of the theory which denies the existence of matter, of the theory of etherial vibrations, of the theory that nothing exists beyond the limits of a single mind, etc. Nay, most of them had been discussed by the Hindoos before the Greeks, and may be easily traced in some of the most ancient of the Hindoo epics that have come down to our time. Take, for instance, the *Mahâ Bharatâ*, justly called the Great. Only its episodes need be examined in order to find several of those theories, and as noble, sublime thoughts as ever modern philosopher, scientist or poet has given expression to. May not this be said, without exaggeration, of the passage in the episode of the *Five Precious Stones*, in which Krishna reproaches the hero for his lack of resentment, energy and resolution, as follows:

"Ne'er was the time when I *was not*, *nor thee*, *nor yonder kings of earth*,
Hereafter, ne'er shall be the time when one of us *shall cease to be*.
The soul within its mortal frame glides on through childhood, youth and age,
Then, in another form renewed, renews its stated course again.
All indestructible is He that spread the *living* universe,
And who is he that shall destroy the work of the Indestructible?"*

* *Account of the Writings, Religion and Manners of the Hindoos*, including translations of their principal works. In 4 vols., 4to. Vol. i., p. 87.

As for the Greek philosophers, there is not one of the doctrines for which our modern philosophers receive so much credit as their original inventors and discoverers, which has not been amply discussed by the Ionic school, the Italic school, or the Eleatic school. Let those who doubt this turn to Diogenes Laertes, or to the dialogues of Plato, in which Socrates is the chief speaker. If neither Laertes nor Plato will be regarded as sufficient authority, then turn to any modern critic worthy of the name who has undertaken to analyze the system of the Greeks. None can be regarded as better authority than Frederick Schlegel. "The doctrine of mechanical union," says the great German critic, "had been *completely systematized* by those early Greeks, Leucippus and Democritus, and in the later teaching of Epicurus had exercised an influence over both Greeks and Romans in a degree *equal to its sway in the eighteenth century.*"* Referring to the doctrine of constant mutation, which we are informed is another wonderful discovery of our modern philosophers, Schlegel proceeds: "One section of these ancient philosophers, whilst differing on various points, had this in common, that they looked upon nature purely on the side of *its perpetual change and motion.* They held that all things were *in a constant flux.* They carried this assertion so far as to *deny that anything was fixed and permanent—they denied that anything was stable in existence,*" etc.†

So much, then, for the novelty and originality of those theories and doctrines which we are called upon to regard as so many conclusive evidences of the immense intellectual progress of the present day, and of the increasing profundity and acumen of our innumerable philosophers!—Ed. N. Q. R.]

It is our object in this article to consider only the changes which have taken place in the science of Chemistry, a subject so wide in its scope that we have only space for a rapid glance at it alone. It seems strange to speak in these terms of that which, as a science, was born just a century ago. Nothing is

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* *Lectures on the Hist. of Lit., Ancient and Modern.* Bohn's edition, p. 42. † *Ibid*, p. 43.

more significant of the intellectual activity of the nineteenth century than to find a science of the widest affinities, and of facts innumerable, progressing through a number of intricate and apparently stable and satisfactory theories within the space of a hundred years. Text-books have proved quite unable to keep pace with its progress. The most of those now in existence are based on a condition of the science which has passed away. Their observed facts are alone reliable; their theories, their nomenclature, their conclusions, their general position, are calculated to mislead the student, and to teach him that which he will be obliged to unlearn if he wishes to continue his studies.

No chemist at the present day is half so sure of his position as were those of twenty or thirty years ago. Though the science has really assumed a much more stable and coherent form than it ever before attained, and though numerous facts fit readily into the existing hypotheses which no ingenuity could reconcile to the old standards, yet scientists have beheld so many fair-seeming edifices falling into ruin, and behold before them such a wide vista of approaching discovery that they are much less inclined than in the earlier days of the study to accept as facts any theoretical views.

One thing is granted. Many of the old theories are dead, no matter what fate may befall those which have taken their place. The discovered facts in chemistry are numbered by hundreds, and any theoretical arrangement which is capable of taking these disconnected facts, marshalling them into ranks, in which each fact finds its appointed place, and out of the confusion bringing an order which is full of the elements of beauty and grandeur, is likely to be far on the road towards truth, even though it be not the full truth itself. Such a position chemical theory has assumed, and we are enabled, through the employment of this instrumentality, to handle a multitude of facts which otherwise could not be brought into any coherent or manageable order.

It is not alone the chemistry of inorganics with which we have now to deal, referring organic chemistry to the action of a hypothetical vital force which removes it out of our

reach. The handling of the simple inorganic compounds was easy compared with the innumerable and highly complex organic combinations. But we can no longer consider them separately. The wall between them has been utterly broken down and trodden under foot by eager climbers up the hill of science. The temple of chemistry must now have niches for every fact, in both kingdoms of the science, ere it can be viewed as complete and firmly founded.

In speaking of Chemistry as being but a century old, reference is made simply to its scientific standing. As a collection of discovered facts it dates much further back. The ancient nations had considerable knowledge of its more evident details, and these were taken up and largely increased by Arabian investigators during the middle ages. European scholars took up their facts and continued to add to them, some little speculation being indulged in, but nothing approaching the coherence of a system being devised. The facts, as yet, were not sufficiently numerous and connected to permit the discovery of their relations. The only attempt at theory that attracted any special attention was that of Stahl, in his phlogistic theory of combustion. This hypothesis, which could only hold ground through the ignorance and partial habit of investigation of its adherents, was worked out with considerable ingenuity, and was adhered to with a persistence worthy of a better cause, by such men as Priestly, Cavendish, and Scheele, even after it had received its death blow at the hands of Lavoisier. Yet the first of these scientists, in his discovery of oxygen, furnished the lever for the overthrow of the theory to which he continued determinedly to adhere.

Lavoisier then was the true father of the existing science of chemistry. He first applied the balance to the products of combustion, and argued that the greater weight of these products was inconsistent with the belief in the loss of the supposed substance called phlogiston. On the contrary the substance had gained, while the air had lost to the same extent. There was plainly a combination instead of a decomposition.*

* *Opuscules*, p. 247.

The discovery of oxygen added substantial force to his theory. It was soon found that this was the constituent of the air that disappeared in combustion, and the important fact, which stands at the threshold of the science of chemistry, was fully announced, that combustion is a process of combination between oxygen and the elements of combustible bodies, and that the light and heat emitted are the results of an elevation of temperature produced by the chemical action. This theory, which seems so simple to us, was then utterly strange and difficult of acceptance to scientists. It was enunciated just a century ago, and from that moment chemistry took rank with the sciences.

We will briefly glance at the further progress of chemical theory, before describing the happy generalizations which now combine its multitude of facts into a coherent, and in great measure, complete system. As to the succession in the discovery of important facts, we cannot attempt to enter this immense field. After the discovery by Lavoisier of the true principle governing combustion he turned his attention to the subject of the formation of salts, announcing the following definitions: An acid results from the union of a simple body, generally non-metallic, with oxygen. An oxide is a combination of metal and oxygen. A salt is formed by the union of an acid with an oxide. These simple propositions formed the basis of a new system of chemistry.*

The principles thus announced as governing oxygen compounds were easily applied to compounds of the other chemical elements, and from them was gradually worked out the proposition which forms the distinguishing feature of the system of Lavoisier, and which long reigned dominant in the chemical world. This is, that all chemical compounds are binary. In all compounds the affinity acts between two elements, simple or compound. These are attracted together and unite through a certain opposition of properties, which is neutralized by the act of combining. We have here, in few words, the dualistic theory, which had its utility in the infancy

* Wurtz, p. 18.

of the science, and which long held sway in the minds of chemists.

To the above theory the newly established nomenclature, first suggested, in 1782, by Guyton de Morveau, was adapted. This skilfully devised language, so clear as to remarkably facilitate the study of the science, and so full of fertile expedients for the introduction of all its intricate facts, had for its basis the dualism of compounds. Thus, since the year 1790, in which it was fully adopted, the dualistic idea has been insinuated into the mind of the student, in the language of chemistry. We know enough of the power of words to know how greatly this must have aided in its retention.

At the same period a German philosopher, Wenzel, was announcing ideas pointing forward to the doctrine of chemical equivalents. Twenty years later Richter took up and developed this law. Yet their labors were allowed to fall into oblivion. They were too incomplete, and too far in advance of their time for acceptance.

But a greater mind than these, that of Dalton, forced similar views upon public attention, adding to the doctrine of definite equivalents that law of combination in multiple proportions, which forms in its entirety the most important discovery ever made in chemical science. Reviving the old Greek idea of atoms he gave it a fixed and definite meaning. He claimed that bodies are composed of small individual particles, which he called atoms. These are of definite size and weight for each element, and the process of combination means simply the union of atoms of different substances into compound atoms. The law of multiple proportions indicated that the atom of one substance might combine with one, two, three, or more, of another substance. This theory had its opponents to master, but it so clearly elucidated the principal mysteries of the science, as then existing, that it was not long in forcing itself into general acceptance.

The next great discovery which aided largely in the progress of chemical science was that made by Gay Lussac, and worked out by him and A. Von Humboldt in 1805. This was the discovery of the fact that substances in a gaseous

state combine in equal or proportional volumes, the volume of the resulting compound being also in a simple proportion to that of its elements. Thus hydrogen and chlorine gases combine in an equal volume of each, forming two volumes of hydrochloric acid. Two volumes of hydrogen combine with one volume of oxygen to form two volumes of water. Three volumes of hydrogen combine with one of nitrogen to form two of ammonia.

All that lies in these facts was not perceived by their discoverer, but they enabled his successors to enunciate a theory which, in a modified form, is still accepted. This was that the weight of the volume of a gas represents the atom weight of its substance. It is as if we could say that each atom of each gas occupies a certain fixed space for every fixed condition of pressure and temperature, and that the space occupied by each expands or contracts equally with equal rise or fall of temperature. Each atom, no matter what its weight and size, when set free from the special attractions of the solid and fluid state, occupies this fixed measure of space, which is the same for all atoms under like conditions. But, despite this evident conclusion from the facts then known, Gay Lussac continued of the opinion that his discovery might be reconciled with the belief of Berthollet, that bodies in general unite in very variable proportions.*

Amedeo Avogadro, an Italian chemist, was the first to enunciate the theory that the particles in gases are separated beyond the reach of reciprocal attraction. These particles he calls molecules, and supposes their numbers to be equal for equal volumes. Hence it follows that in gases the weights of the molecules are proportional to the densities.† A similar hypothesis was announced by Ampere, in 1814. He claims that "at equal temperatures and pressures, the particles of all gases, whether simple or compound, are placed at equal distances from each other. On this supposition the number of the particles is proportional to the volume of the gas." ‡

* *Memoires de la Société d'Arcueil*, t. 1., p. 232. † *Journal de Physique*, t. 73, page 58. ‡ *Annales de Chimie*, 1re series, t. xc., 43.

Although these writers use the terms molecules and particles, they did not employ them in the fixed sense in which they are now applied, and they might as well have used the word atoms, for any distinguishing sense in which they understood the term molecules. This theory is now known not to be exact if applied to all substances, either simple or compound. The vapors of arsenic, phosphorus, and mercury, for instance, deviate from the rule. But the more modern interpretation of the word molecule gives Ampere's theory a correctness which it lacked in its primitive form, and we can now say with some assurance that the molecules of all gases occupy equal spaces under like conditions.

Meanwhile the dualistic theory of chemistry was being developed and completed by Berzelius, the great Swedish chemist, by Davy, and others. Among the earlier results of the labors of Berzelius, is the theory that the atoms of certain elements are united two by two, and that on entering into combination this union is preserved. This was a step in advance of the old views concerning atoms. His idea of double atoms is a constituent feature of modern chemistry, though with a much wider application, and under different relations from those in which he viewed it.

Another of his important additions to the science was the devising of a system of notation adapted to indicate the atomic constitution of bodies. Before him there had been some efforts to express chemical relations in an abreviated form. Dalton had made some ingenius efforts in this direction, the main fault in his system being the great space which its representation occupied. Berzelius, on the contrary, succeeded in devising that very simple and contracted system which still forms the language of chemistry, and which has been of such vast utility in rendering evident at a glance intricate relations and changes. There have been various changes made since his time in his mode of representation, as theory has advanced, but the principle of his system is yet retained as the most important feature in the explication of the science.

The dualistic theory was then fully accepted, and Berzelius introduced it into his formulæ, making its starting point the

theory of salts. His observations on salts enabled him to greatly advance this branch of the science, and he applied the idea of dualism to the action of acids on bases with a degree of precision it had not known before. He likewise took up another of the views of Lavoisier, that in relation to the existence of compound radicals capable of simulating elements in their chemical behavior. This idea he also greatly expanded. The existence of such radicals in a separate state, as in the case of cyanogen, led him forward to the theory that they existed widely throughout chemical compounds, but that they were, in nearly all cases, incapable of being isolated. Similar views had been already advanced by Lavoisier, and by others succeeding him, but they were carried forward by Berzelius until he had extended them to all oxygenated compounds. "Organic substances," he said, "are formed of oxides containing compound radicals."*

This theory of radicals was carried forward by Berzelius and his contemporaries until it was made to fit, with beautiful precision, into a great variety of chemical phenomena, and added greatly to the strength of the dual system. It had its strong opponents, on the ground that these radicals, as *ethyl*, and its numerous analogues, for instance, were purely hypothetical. They had seen and handled ether, but no man had ever seen it deprived of one atom of oxygen, leaving this imaginary ethyl. The answer was that Gay Lussac had isolated cyanogen, and proved it to act like an element; that Bunsen, at a later date, had isolated cacodyl, another compound radical; who then could say what other isolations might not be made? Ether dropped its atom of oxygen chemically, but at once took up an atom or molecule of some other substance. The other supposed radicals behaved in the same manner. There was then good reason to believe in their positive existence, although their strong affinities stood in the way of their separation.†

As the science then stood, these positions seemed almost unassailable, and the doctrine of organic radicals and of dualis-

* *Traite de Chimie*, 1830, t. ii., p. 111. † Work cited, vol. i., p. 9.

tic compounds assumed a brilliant phase which it was not long to retain. For that idea of substitution was already coming into vogue which was destined to overthrow dualism, and inaugurate the new system of chemistry.

The system of dualism thus introduced into organic chemistry was, at the same time, strengthened in mineral chemistry by the electro-chemical theory. Berzelius was not the author of this theory, though it attained such prominence through his efforts and his authority. Several names concur in its origination, principally that of Davy, but the Swedish chemist gave it a form which it had not before possessed. He supposed each atom to have two poles, respectively electro-positive and negative, the atoms of different bodies being polarized in different degrees. When atoms combine they join together by their contrary poles, producing a neutralization of their electricities, with the evolution of light and heat.*

This theory had, from the first, several serious discrepancies to contend with, but these were all speciously explained away by its advocates and the doctrine firmly established. There is little doubt but that it has more or less basis in truth, but certainly not to the extent that was then claimed for it. It gave renewed strength to the dualistic theory and the doctrines of Berzelius were widely received as indisputable propositions. Every compound body is composed of two elements, one electro-positive, the other electro-negative. How strikingly this confirmed the ideas of Lavoisier, especially his theory of salts. The mode of combination could be explained with a simplicity that was alluring, and that gave the highest prominence to the theory. Chemists as a rule yielded to it. It reigned in books; it was supreme in education; it gave rise to great discoveries; and in it the old system of chemistry culminated, and appeared to be too firmly founded to be readily overturned.*

Yet even then a number of young chemists were at work, whose labors were destined to prove the incompleteness of all

* Work cited, vol. i., p. 45. † Wurtz, p. 70.

this hypothesis, and to give the death blow to the dualistic theory which had reached its apogee in the hands of Berzelius. Dumas, Laurent, Gerhardt, Hofmann, and a number of other iconoclastic scientists, were steadily undermining the strongly built edifice, that held with so many sound, so many weak timbers.

Dumas was the first to seriously attack the cherished ideas of Berzelius, and to enter into a contest which then appeared desperate. His earliest announcement of the new ideas was made in a memoir read before the Academy of Sciences, January 13, 1834, in which he says: "Chlorine possesses the remarkable property of laying hold of the hydrogen of certain bodies, and *replacing* it atom for atom." There could not well be a clearer announcement of a new thought. His continued observations soon enabled him to extend the idea, and to announce that hydrogen may be replaced by chlorine, bromine, iodine, oxygen, etc., gaining an atom of each of the former, or a half atom of oxygen for every lost atom of hydrogen. This idea received its full extension from Laurent, who gave forth the hypothesis that the chlorine, etc., in these bodies takes the place of the hydrogen, and performs the same functions. He founded his doctrine on the similarity of properties between the chlorinated and the original hydrogenated body. There was in this idea a strong attack upon the electrochemical theory, for how, under such a theory, could chlorine, a negative element, fulfil the same function in a compound as hydrogen, a positive element?

While Berzelius was vigorously attacking these assaults upon his school, and expanding the radical idea to embrace every new fact, his opponents were busy in making new discoveries. Laurent was enriching the science by his admirable researches upon napthalene, furnishing a large number of substitution compounds. Regnault was having equal success in his researches on the chlorinated derivatives of hydrochloric ether and Dutch liquid, and Malaguti, in his study of the action of chlorine upon ethers. Dumas, at the same time, was extending the theory by showing that groups of atoms, or compound radicals, could be substituted for simple bodies,

such as hydrogen. The school of the Swedish scientists attempted to fit this new fact into their theory, but Dumas gave to their argument an unanswerable reply,* and by degrees powerful advocates were won to the new theory.

Liebig gave in his adhesion as early as 1839, doubting the views of Berzelius, and declaring that in the theory offered by Dumas he found the key to a great number of phenomena in organic chemistry.† Even Berzelius ended by yielding to the force of the significant facts which were being constantly arrayed against him, and the dualistic doctrine of chemistry received its death-blow.

Having thus briefly glanced at the earlier progress of chemical theory, we will proceed to review the new doctrines which have replaced or completed those previously existing. Among the first efforts to theorise upon the accumulating facts of substitution was the hypothesis of nuclei, proposed by Laurent in 1836. In this view organic compounds were formed of nuclei, each containing a fixed number of carbon atoms, united with a determined number of other atoms. Around each nucleus other atoms may arrange themselves, forming new compounds, in which the nucleus remains intact. Thus hydrogen may be removed, chlorine taking its place; the latter may yield to oxygen, etc., the general character of the aggregation remaining intact throughout these changes.

This hypothesis, however, gained but few adherents, it being set aside by a simpler and more embracing doctrine. Leopold Gmelin, it is true, made it the foundation of his celebrated "Handbook of Chemistry," but did not succeed in bringing it into general use. The theory which replaced it, and which has ever since been growing more and more into favor, was that known as the doctrine of chemical types, proposed first by Gerhardt. This eminent chemist had, at a previous date, announced new views as to the composition of acids and salts. He took up thoughts previously proposed by Davy, Dulong, Liebig, and others, and

* *Compte's Rendus*, viii., 600. † *Annalen der Chemie und Pharmacie*, xxxi., 119.

derived from them a new hypothesis of acid reactions. He declared that an acid is a hydrogenated body, the hydrogen of which can be exchanged by double decomposition for an equivalent quantity of metal. From this change there results a salt. Thus, when nitric acid acts upon potash the atom of potassium in the base goes to take the place of the atom of hydrogen in the acid, the hydrogen combining with the freed oxygen of the base to form water. We have thus a unitary instead of the dualistic system. The hydrogen of the acid is replaced by a metal, but the original of the compound is retained, and there is no complete junction of two separate compounds, as formerly supposed. In this view, acids and salts exhibit the same constitution, the former being salts of hydrogen, the latter salts of metal.

In 1839 Dumas discovered chloracetic acid. This acid is formed from acetic acid by the substitution of three equivalents of chlorine for three equivalents of hydrogen, all the other elements remaining unchanged. But, strangely, the new acid is closely similar to the original. It seemed then as if the chlorine, in taking the place of the hydrogen, *must play the same part* in the new compound as hydrogen had played in the original. He expressed this idea by saying that these two acids belonged to the same *chemical type*. He supposed that the properties of a compound must depend less on its elementary atoms than on their grouping and position in the molecule. This was the first form of a doctrine which was destined to be expanded in a new chemistry.

Certain researches on the reactions of a class of bodies analogous in many respect to ammonia, and surprisingly so in their properties, led Dr. Hofmann to refer these to ammonia, considered as a type of chemical formation; a very similar view having been entertained by Wurtz.*

In 1851, Williamson published his beautiful researches on etherification, from which researches the water-type was introduced into chemistry. He compared with water not only alcohol and the ethers, but also the acids, oxides, and salts of

* *Compte's Rendus*, xxviii., 224.

mineral chemistry. Water being formed of one atom of oxygen and two atoms of hydrogen, it is possible to replace one or both of these latter, either by atoms of other bodies or by groups acting as radicals. If, in a molecule of water, one atom of hydrogen is replaced by ethyl, we have alcohol as the result. If now the second atom be replaced by ethyl, we have ether. Replace one atom of hydrogen by potassium and the result is potash; replace the other atom by an acid radical, and a salt results. All these bodies belong to the same type. They all contain one atom of oxygen combined with two other elements, simple or compound, representing the two hydrogen atoms of water. Throughout all these substitutions the skeleton may be traced, built upon the same pattern as water.

These views were grasped and generalized by Gerhardt, who quickly perceived the extension of which they were capable. He added the hydrogen and the hydrochloric acid types, and extended the application of the water type by some brilliant discoveries. He joined with Laurent in regarding the molecule of hydrogen as composed of two atoms, regarding this gas, in its free state, as the hydride of hydrogen. He extended this idea to the metals and others of the non-metallic elements, and to many organic compounds, viewing them as having double molecules in their free state, that is composed of two atoms or compounds, each equivalent to one atom of hydrogen. Later researches on the gas volumes of the elements have partly modified this view. We now know that mercury, zinc, cadmium, and barium, have single atomed molecules, that phosphorus, arsenic, and probably others appear to have four atomed molecules, that sulphur in one state appears to have six atoms, and that oxygen, in the form of ozone, is probably three atomed. The other elements, so far as has been ascertained, are double atomed.

The hydrochloric acid type is really identical with the hydrogen type. It may be viewed as a molecule of hydrogen in which one atom has been replaced by an atom of chlorine. We may in like manner view the molecule of chlorine as having one atom replaced by a hydrogen atom. Thus from a

molecule of hydrogen and one of chlorine are formed two molecules of hydrochloric acid. Under this type may be ranged numerous organic and inorganic compounds, all in fact which are thus joined in binary relations.

It was not long before it was perceived that the doctrine on which the theory of types was originally formed—that of a similarity of properties in the analogous compounds—was incorrect. The new elements taken in were found to have a strong influence upon the properties of the compounds. Thus the introduction of oxygen into a compound of the water type, such as alcohol, had the effect of acidifying it, while the substitution of an alkali for the hydrogen of water gave the resulting compound a strongly basic character.

The same result is apparent in the ammonia type. Ammonia is a strong base. If its hydrogen is replaced by neutral groups, such as methyl and ethyl, the basic power is retained. But if the hydrogen of a compound ammonia is replaced by an acid radical the derivative is neutral, or even acid.

Thus, under this theory, which has been widely accepted by chemists, and seems likely to stand the test of new discovery, the principal chemical compounds may be referred to one of three or four typical combinations. These consist, first of hydrochloric acid, formed of one atom each of hydrogen and chlorine, and represented in the notation as H. Cl. The second is water, composed of one atom of oxygen and two of hydrogen, represented by H^2O, or H-O-H. The third is ammonia, comprising one atom of nitrogen and three of oxygen, represented by H^3N. A fourth type, proposed by Dr. Hofmann, is marsh gas, containing one atom of carbon and four of hydrogen, represented by H^4C.

The more complex the typical group the wider the group of relations into which it may be traced. Thus the atoms of hydrogen in ammonia may be one after the other replaced, forming a succession of derivatives. If this replacement be by different elements the range of derivatives becomes greatly widened, it being possible for ammonia, composed of two substances, to yield a derivative composed of four different

substances. In marsh gas this possibility is yet more widely extended. The five atoms which it contains affords room for a wide range of variations, and this power of carbon to take up four atoms of hydrogen renders it peculiarly fitted for the part it is called upon to play in chemistry, as the basic agent in the complicated organic compounds, into which it so prominently enters.

There are, however, several simple compounds which will not come under the heading of any of these types. These have, by an extension of the idea, been classed under what are known as condensed and mixed types. Thus, sulphuric acid, represented by SO^4H^2, is equivalent to two molecules of water in which two atoms of the hydrogen have been replaced by the radical, sulphuryl SO^2, yielding $(SO^2)\,O+H^2O$. In this we have the origin of the doctrine of polyatomic radicals, in that one radical atom can replace and play the part of two elementary atoms. This step leads us directly into the growth of the doctrine of the atomicity of the elements, that theory which completes and renders coherent the whole of modern chemical theories.

In what are called mixed types polyatomic radicals play a similar part. Suppose a molecule of water to be placed in contiguity to a molecule of hydrochloric acid. We may imagine the hydrogen atom of the latter, as well as one hydrogen atom of the water molecule to be replaced by a single radical, sulphuryl for example. This radical will rivet together the residues of the two molecules which have each lost an atom of hydrogen and thus form one compound. Such a compound is known as a mixed type.*

In this theory of types we regain the theory of radicals, but in a rejuvenated form. The residue of a compound molecule, which is left when an atom or a group has been removed in the process of substitution, represents the old radical, but it has ceased to have the essential significance in the minds of chemists which was formerly given to it. So the electro-chemical theory fits into this new doctrine, and

* Wurtz, p. 130.

displays in a graphic form the real character of the difference between acids, bases, and salts. If, in the water type, for instance, represented by H-O-H, one atom of the hydrogen is replaced by a positive radical, we have +R-O-H, or a base. If it be replaced by a negative radical we have -R-O-H, or an acid. If both atoms of hydrogen be replaced, one by a positive the other by a negative radical, we have the symbol -R-O+R, or a salt.

In the ammonia type this principle has still greater extension, several acids and bases being formed by the successive replacement of three atoms of hydrogen. There are thus formed what are known as acid, neutral and basic salts, according as a portion of the acid or basic hydrogen remains in the salt, or as it is completely removed. In the ammonia type some chemists have given distinctive names to these products to separate them from their analogues in the water type. Thus an ammonia acid is an amide, a base is an amine, and a salt is an alkalamide.

The theory of types embraced an immense number of compounds, both mineral and organic, throwing down the wall which custom had raised between mineral and organic chemistry, giving to the notation an admirable clearness, and leading the way to numerous discoveries by enabling chemists to perceive at a glance the bonds of relationship between known and possible compounds. Yet it failed to go to the root of things. It did not show what these types really represented, or why hydrogen, water, and ammonia should be chosen as the typical compounds rather than others. This difficulty has since been resolved, by an important extension of the theory. The chemical types refer to the results of a fundamental property of atoms called atomicity. We will proceed to explain its character and application.

We will not trace it, however, through all the details of its history. These, though interesting, are too extended for our space. The details of the theory itself, with some features of its application, are all that we can give. Chemists arrived at the theory through observation of the reactions of complicated organic compounds. It can be best delineated by commencing

where they ended, with the elements themselves. There is, indeed, much significance in the formation of the typical compounds. It might be asked why chlorine is only able to attach to itself one atom of hydrogen where oxygen requires two, nitrogen three, and carbon four. This distinction, which extends through all the reactions of these elements, must have some important meaning.

There are compounds in which carbon is united with less than four atoms of hydrogen. But in these cases its affinity for hydrogen is not satisfied. It can take other atoms until it has gained four. Beyond this point a single atom of carbon cannot go. This then is considered to be its point of saturation, the atoms of carbon having four times the combining power of those of hydrogen. The same rule holds good in the cases of water and ammonia, and from it we derive the idea that atoms of chlorine, oxygen, nitrogen, and carbon, are equivalent respectively to one, two, three, and four atoms of hydrogen. This peculiarity has been signified in chemical language by calling these elements respectively univalent, bivalent, trivalent, and quadrivalent, which terms display their hydrogen-fixing power.

But the relations given here are not confined to these compounds. The elements retain this power through all their relations. Thus if hydrogen be replaced in any compound by chlorine the exchange takes place atom for atom. But if it be replaced by oxygen, two atoms of hydrogen are lost for every atom of oxygen gained. Here we have again the fact that an atom of oxygen is equivalent to two of hydrogen. This relation of the atoms to each other is called by Hofmann quantivalence, the atom-fixing power of any element or radical being designated by Roman numerals or dashes placed over the atomic symbol.

It appertains not alone to the elements we have named, but to all the elements, these being separated into classes according to their quantivalence, which extends from one to six in the different elements. The symbol of quantivalence then simply serves to show how many atoms of hydrogen or its equivalents the atom of the element is capable of replacing

in a compound, or how many such atoms are required to satisfy its affinities. The relations it thus displays in the case of hydrogen are carried through all its reactions with other substances, so that we are forced to conclude that these are no accidental or unimportant results, but that they point out distinctive properties hidden in the natures of the elements, and bring us to the threshold of possible discoveries in chemistry deeper than mere combinations and reactions, to a hope of some time gaining information as to the innate characters of the elements themselves, and the producing causes of the phenomena of affinity.

The quantivalence of the chemical elements is by no means always the same. Under different conditions they often exhibit different atom-fixing powers. Each element, however, has a maximum power, which it never exceeds. This is called its atomicity, and the elements are distinguished as monads, dyads, triads, etc., according to their degree of this power. Thus nitrogen is a pentad, though it is more commonly trivalent, and lead is a tetrad, though it is usually bivalent. The elements are usually classed, however, according to their prevailing quantivalence, even though they sometimes display a greater atomicity.

It was as late as 1858 that the theory of atomicity began to gain its full extension. In that year Kekulé first broached the idea of the tetratomic power of carbon, being led to it by the fact that in the simplest organic compounds one atom of carbon is always united with a sum of elements equivalent to four atoms of hydrogen.* Thus, in carbonic acid, CO^2, the two atoms of oxygen are equivalent to four of hydrogen Now carbon can content itself with one atom of oxygen, as in carbonic oxide, but then its affinities are not satisfied. We perceive this in its power of taking up another atom of oxygen, forming carbonic acid, or two atoms of chlorine, forming phosgene gas.

The organic hydrocarbons are capable of being extended into series, known as homologous series, becoming gradually

* *Annalen der Chemie und Pharmacie*, cvi., 129 (1858).

more and more complicated, yet retaining a fixed type of formation, each higher term in the series being formed by successive additions of a fixed sum of atoms to a basic compound. We may instance the series of alcohols, which grow more and more complicated by such equal additions, and the corresponding series of ethers, each of which differs from its analogous alcohol by the loss of H^2O, equal to one molecule of water.

In the series of saturated hydrocarbons having for base marsh gas, or CH^4, the second term is not C^2H^8, as would at first be supposed, but C^2H^6, and the advance is by successive additions of CH^2. It is an important question how this fact can be made to conform to the theory of atomicity. It was answered by Kekulé in the memoir above cited. He supposes that the two carbon atoms, in the second term of the series, are combined by means of an atomicity of each, there being but six atomicities left, which are satisfied by the six hydrogen atoms. In the third term are three carbon and eight hydrogen atoms. We may conceive these carbon atoms as placed end to end, the central one being soldered to each of the other by one of its atomicities. Thus it has but two left, while each of the others have three left, having employed but one each. There are thus eight atomicities free for exterior work, and these are satisfied by eight atoms of hydrogen. Thus the carbon atoms form a chain whose links are riveted by part of the force of combination.

If now we take the second term of this series, composed of six hydrogen and two carbon atoms, we may replace one atom of hydrogen by one of chlorine, forming a compound known as chloride of ethyl. It is still saturated, for the chlorine atom is of the same value as the hydrogen atom which has gone out. But suppose, on the contrary, that it be replaced by an oxygen atom? The latter has two atomicities, one of which attaches it to the carbon atom, while the other is free. This is the real constitution of what is known as a radical, a group of atoms all whose atomicities are not satisfied, and which, therefore, tend to combine with other substances. In the present case there is but one atomicity to be

satisfied. The radical, therefore, is equivalent to a monad, and can only combine with a monad, as with an atom of hydrogen. If this combination be made, we have the original atom of hydrogen replaced by the group HO. But this group is simply a molecule of water which has lost an atom of hydrogen. It is then a radical with monad power, and can replace an atom of the monad hydrogen. In the case given, the compound known as ethyl hydride is by this change converted into ethyl hydrate, or alcohol.

But suppose an atom of nitrogen had replaced the hydrogen atom in the basic compound. It would need but one atomicity for this purpose, and would have two free atomicities. It would thus form a dyad radical, being capable of absorbing two hydrogen atoms, or their equivalent. Such a case really occurs, forming the compound known as ethylamine.

This theory had been applied to the organic compounds before it received its final application to the elements. For instance, it was known that where alcohol unites with only one molecule of a monobasic acid to form a compound ether, glycerine takes up three molecules of such an acid to form a neutral fat. Glycerine thus represents a tribasic alcohol, containing three hydrogen atoms, replaceable by three compound radicals.* We have already seen how the dyad radical sulphuryl can replace two atoms of hydrogen in two molecules of water. If now we conceive of three molecules of water in which three atoms of hydrogen are replaced by the triad radical glyceryl, we have an idea of the formation of glycerine which leads us, by a knowledge of its type of formation, to an understanding of its reactions.

This conception of the monatomic and triatomic alcohols led to a belief in the possible existence of diatomic alcohols. Efforts were at once made to isolate such compounds, and with gratifying success, the diatomic alcohols known as glycols being discovered. This soon led to the discovery of a series of compounds, the glycolic analogues of the higher terms of the alcohol series.

* Wurtz, *Théorie des Combinasions Glycériques.*

We advance this instance as evidence of the great aid to chemical discovery which exists in the new theory. ' Formerly the discovery of new compounds was chiefly the result of a groping in the dark. But we perceive here a case in which an organic family was seen to be incomplete without a substance whose necessary constitution only was known. The substance itself was soon found when chemists once knew where to seek it. Numerous compounds have been added to chemistry through this process, the theory first declaring what these substances should be, pointing out their analogies to existing substances, and the probable mode of grouping of their elements. Discovery was thus rendered comparatively easy when the goal lay in full view, and the avenue of approach was hedged in by the conditions necessary to be observed.

The theory of atomicity also enabled chemists to attempt explanations in a great number of cases which had before been mysteries. In the *isomeric* bodies we have instances of two bodies alike in composition, yet with great difference in properties. It was always supposed that a difference in the arrangement of the atoms caused this difference, but nothing definite was known. Now chemists can go further, and by tracing these substances through their processes of formation, often succeed in determining the relations between the atoms, and consequently the structure of the compound. They can, in fact, by different processes of formation, produce bodies alike in their atomic composition, but differing in the grouping of these atoms, and exhibiting different properties, thus producing new cases of isomerism.*

The modern views concerning molecules are based on the apparent fact that hydrogen atoms, when in their free state, combine in twos, forming elementary compounds. This relation has been traced to many of the elements and to compounds, and is supposed to be general, except in a few special cases. We have already named zinc, and several other elements as not conforming to it, their molecules seeming to

* Cooke, p. 99.

be monatomic. So in the cases of phosphorus, arsenic, and possibly one or two more elements, and in a number of compound bodies, the molecule appears to contain four atoms. This opinion is reached from the volume they occupy in the state of vapor, but there has been broached another view of the case, which puts it in a different light. Many of these vapors need to be raised to a very high temperature before they sufficiently resemble the condition of a true gas to be compared with the gaseous elements.* In this case their molecular volume is often four, that of hydrogen being two, and the atom of hydrogen (the unit of measurement) being one.

But has not the great heat to which they have been subjected produced a special effect upon them? May it not be possible that the compound has been separated into its constituents by the action of heat, the increase in volume being thus produced by a doubling of the number of molecules? Such a condition is possible, even though we may fail to trace it, from the fact that the substances, being intimately mixed, may recombine during their cooling, so that no trace of the separation remains. There are cases, however, where this recombination does not take place, and which, therefore, serve us as crucial tests of such a possible condition.

We have thus attempted to give, in as clear language as the case admitted, a synopsis of the progress of the science of theoretical chemistry, and an explanation of the present condition of the science. It may be seen, despite its wonderful progress, and the efforts of the many acute minds which have devoted themselves to it, still in a transition state. Theories have been evolved which beautifully explain many of the old mysteries of the science, and give it a unity and meaning such as it never before possessed. But we are far from understanding all these mysteries, and the rapid process of discovery is evolving new problems, which must be all answered before these scientific views can be considered stable. Yet the new theory has proved a powerful agent in

* Cooke, p. 93.

such explanations, and is adapting itself to new discoveries with a readiness that adds much to its probability. We are as yet but on the threshold of the science, but we are vouchsafed glimpses into the temple which reveal to us hints of the chemistry of the future, when endless mysteries are to be unfolded, whose explanation we now see but "as through a glass, darkly."

ART. VIII.—1. *The Horse and his Treatment in Different Ages, by Civilized and Uncivilized Man.* London.

2. *Memoire sur la possibilité de améliorer les chevaux en France.* Paris.

THE Arabs have had an adage from time immemorial which runs thus: "The man who would wrong a horse that he is paid for feeding, and taking care of, would wrong his mother." There is no nation of ancient or modern times, claiming to be brave or generous, which has not entertained the same sentiment. Certainly no people have been more strongly imbued with it than our own, and none who know New Yorkers will deny that, whatever faults they may have, injustice to the dumb animal, especially to so noble an animal as the horse, is not one of them.

Yet in no other city in the world, equally enlightened, is the horse more cruelly wronged than he is in New York. What may well seem incredible is, that this is true altogether independently of the condition of our railroad horses, omnibus horses, hack horses, etc. The sufferings of all these have become proverbial, and most cheerfully would we do anything in our power to mitigate them. But those who keep horses merely to make money out of them are not likely to be much influenced by argument or reason, as to the treatment those animals should receive. In general such are equally proof against denunciation, invective and scorn.

Accordingly we, who are not prone to mere sentimentality, have never discussed in these pages the case of these unfortunate animals. Seeing that we address few or none of those base enough to maltreat them we have confined our efforts in behalf of the sufferers to the newspapers, deeming it useless to do anything more in this journal, for the reason mentioned, than to appeal to the newspaper editors, while discussing kindred subjects, for their interposition in behalf of the wronged and oppressed animals. That few have exerted themselves more earnestly, in this way, than we have, for twenty years past, our articles published from time to time in the two leading dailies of America would amply prove—articles written always anonymously, and without any other motive than to mitigate the sufferings of an animal which from the earliest records of history has been the faithful friend and companion of man—the sharer alike of his dangers and his pleasures—characteristics in which the horse is rivalled among all the lower animals by the faithful dog alone.

Nor is our idea of the horse, or our wish to protect him from maltreatment, a mere abstraction. Both are the results of the personal observation and experience of a longer life than is allotted to most men. All would avail us nothing, however, did we address ourselves here to those who habitually wrong and ill-treat horses; we are quite aware that we might as well address ourselves to the Cherokees, to the Choctaws, or to any other tribe, however ignorant or ferocious. We address ourselves to the owners of horses, and not to those owners who keep them for mercenary purposes, and value them only in proportion as their blood and marrow promise to bring in a certain number of dollars. In short, we address ourselves to those who have both the intelligence and understanding to judge for themselves as to whether what we tell them be just, or unjust, true or false; that is, we address ourselves to the class of gentlemen who keep horses for the pleasures they afford themselves and their families, but who entrust the care of them to livery stables. Now, far be it from us to deny that there are honest men among the livery-stable keepers of New York; men who would be as incapable as any one of

wronging the horses left in their charge. Our own experience has proved to us, most satisfactorily, that there are several such. But it is not with these we have to do on the present occasion, except so far as we can hope to increase their number.

To many it will seem incredible that there are any such as those whose plans and practices we propose to sketch in miniature in this article; but those whose interests are directly concerned can have no difficulty, on a little reflection, and a slight exercise of the memory, in recognizing the facts. Those who think their interests are not concerned, and who are indifferent to the horse, are too apt to think also that it is none of their business what treatment the animal receives. Fortunately, there are but few of this class; at least there are but few of them among our readers; and it may be possible so to impress these few with the true characteristics of the horse, and the claims which he has on every enlightened member of the human family for protection, as to alter their views and feelings in this respect. Accordingly we will make the effort before we present even in outline the peculiar tribe of vampires which form our chief subject.

In the most ancient books extant—in sacred as well as profane history—the horse is intimately associated with man in all his struggles. Among the finest tombs found in Egypt are those of horses that had often saved their masters in battle. On the vestibule of one of the sepulchral chambers in the great Pyramid of Gaza is a bas-relief representing a horse with his breast pierced and his life-blood flowing, while his master leans over him, wringing his hands and bitterly weeping.

There never has been a great poet who has not paid one of his finest tributes to the beauty, strength, courage, intelligence, generosity, and fidelity of the horse. Many compare the book of Job to the Iliad in grandeur and sublimity; and in neither are there more sublime passages than those in which the noble qualities of the horse are portrayed. The most beautiful in Job and Homer are too familiar, from being so often quoted, to render it necessary for us to quote them here. The descriptions of Virgil, Dante, Tasso, and Milton are not so much quoted; but each has strong

melodious arguments in favor of the horse—arguments which in their own peculiar, impressive way have saved him from many a blow and many a wrong. How true this is of more than one passage in the Mantuan every intelligent student of the classics is aware. Who, for example, that has ever read the third book of the Georgics, does not remember the fine description in which the following lines occured?

> Tum, si qua sonum procul arma dedere;
> Stare loco nescit, micat auribus et tremit artus,
> Collectemque premens volvit sub naribus ignem.

There never was a great general who would not weep for his favorite horse as for a faithful, beloved friend. The greatest have honored their remains with tombs bearing appropriate inscriptions. This is true not only of Alexander and Lysander, but also of Hannibal and Scipio Africanus. Who has not heard of Bucephalus, which, it is said, allowed no one to mount him but the great conqueror? So great was the affection and esteem of Alexander for this animal that, not content with having a monument dedicated to his memory, in the same spirit he caused an important city to be called Bucephalus, that his name might be commemorated as long as possible.

Both Plutarch and Suetonius give a similar account of Cæsar's. No one was fonder of the horse or knew better how to use him than the founder of the Roman Empire, the conqueror of the Gauls, and the author of the celebrated Commentaries. His horse, too, refused to be ridden by anyone but Cæsar, who had a statue erected in his honor, which, after the animal's death, he dedicated to the goddess Venus.*

Plutarch tells us, in his Life of Nicias, that when the Lacedemonians defeated the Athenians in Sicily they caused all the horses they had captured in battle to be shorn—leaving them neither mane nor flowing tail—and led them in triumph into the city of Syracuse, knowing that nothing would give their proud and brave, but now subdued enemy, more pain than to see the animals they admired and esteemed so much thus disfigured and degraded, like ladies robbed at once

* Sueton, *Vita Cæsar*, c. 61.

of their beautiful tresses and flowing garments. No doubt the services rendered by the horses to their masters during the battle, in enabling them to hold out much longer than they could otherwise have done, was not without its influence on this barbarous conduct of the Lacedemonians. That many of the degraded animals had saved the lives of their masters was well understood. Several modern writers maintain that there were horses in the Athenian army under Nicias belonging to the class of which the famous horse ridden by King Charles of France at the battle of Fornuova, was a type. Italian historians tell us that the king would undoubtedly have been captured or slain by their countrymen, in that battle, had not his horse by "kicks and plunges disengaged his master from those who had surrounded him." Philip de Comines, in his interesting narrative of the battle, at which he was present, says that the performances of this animal were almost incredible. His name was Savoy, and he was distinguished alike for his beauty, his intelligence, and his courage. "The king," proceeds the historian, "had the best horse under him in the world, and therewith he stood his ground bravely, till a number of his men, not a great way from him, arrived at the critical moment, when the Italians ran away." *

The history of the chase also is fraught with instances of the most profound grief produced by the loss of a favorite horse. Thus, for example, in Scott's beautiful poem of the Lady of the Lake there is no more touching passage than that in which the hero bewails the death of his trusty steed, so that there are scarcely two lines in the whole range of English poetry which more readily find an echo in every heart capable of a generous emotion than—

> "Wo worth the chase, wo worth the day,
> That cost thy life, my gallant gray!"

It is not alone in the poetry of war, and in the poetry of the chase, that the horse occupies a prominent place and becomes an object not only of interest, but of affection. In

* *Mémoires* de Philippe de Comines.

the love poetry of all nations, especially those nations having any pretensions to heroism, he is still more prominent, and lays a still stronger hold on our sympathies. There is no reader whose memory will not furnish him with abundant illustrations of how much beauty, as well as bravery, owes to the horse. It should be remembered that in the very term *chivalry* the idea of the horse is the leading one. There could have been no chivalry, in the proper sense of the word, without that noble animal, whose name is almost inseparable from "brave knight" and "lady fair." We have said that there never was a great warrior or epic poet who had not a fondness for the horse; we may as truly add that there never was a lyric poet who was not equally fond of that animal—at least equally fond of conferring on him honor and renown—equally fond of associating him with all that is noblest and most fascinating in human nature. Nor need we go beyond the Bard of Hope:

> "At bleating of the wild watch-fold
> Thus sang my love: 'O, come with me,
> Our bark is on the lake, behold,
> *Our steeds are fastened to the tree.*
> Come far from Castle-Connor's clans—
> Come with thy belted forestere,
> And I, beside the lake of swans,
> *Shall hunt for thee the fallow-deer.*'"*

Among the three or four fine lyrics of Lady Dufferin, including her "Lament of the Irish Emigrant," which have been translated into every language, no one is more beautiful, more tender, or fuller of sweet, plaintive melody, than her "My Arab Steed." It is so noble a tribute to the horse, and is regarded by all who admire him as so well-deserved, that there is scarcely a first-class stable in England, belonging to a gentleman or lady of culture, in which there is not an elegantly printed copy of it hung up in an appropriate frame. But "My Arab Steed" is too familiar to our readers to render it necessary that we should transcribe it here. It is, perhaps, otherwise with Bulwer's fine lyric, "To My Horse," and, as

* *O'Connor's Child; or, the Flower of Love Lies Bleeding.*

this is but little inferior to that of the worthy descendant of Brinsley Sheridan, we subjoin a stanza or two:

"Away and away! I *exult in the glow*
Which is breathing its pride on my cheek as we go;
And blithely *my spirit springs forth in the air*,
Which is waving the mane of thy dark flowing hair.

"Hail! thou *gladness of heart and thou freshness of soul*,
Which have never come to me in pleasure's control;
Which the dance and the revel, the bowl and the board,
Though they flushed and they fevered, *could never afford*."

But the great naturalist honors the horse as much as the warrior or the poet. "Of all quadrupeds," says Buffon, "the horse possesses, together with grandeur of stature, the greatest elegance and proportion of parts. By comparing him with the animals immediately above or below him, we find that the ass is ill made; that the head of the lion is too large; that the limbs of the ox are too slender and too short in proportion to the size of his body; that the camel is deformed, and that the grosser animals, as the rhinoceros and elephant, may be considered as rude and shapeless masses. The great difference between the head of man and that of the quadrupeds, consists in the length of their jaws, which is the most ignoble of all characters. But though the jaws of the horse be very long, he has not, like the ass, an air of imbecility; nor, like the ox, of stupidity. The regularity and proportion of the parts of his head give him a light and sprightly aspect, which is well supported by the beauty of his chest. He elevates his head, as if anxious to exalt himself above the condition of quadrupeds. In this noble attitude *he regards man face to face*." No veterinary surgeon has studied the horse more thoroughly than Buffon, and in proportion as he has studied him the animal has excited his admiration, gained his affection, and prompted him to appeal to the nobler instincts of humanity in his behalf.*

* "Ailleurs 'le glorieux compagnon des plaisirs de l'homme est dans un état d'esclavage si ancien, qu'on ne saurait guère plus le rencontrer dans sa dignité naturelle; il porte sans cesse les *empreintes cruelles du travail et de la douleur;* sa bouche est déformée par les plis que le mors a produits; ses

Cæsar tells us in his Commentaries that the brave Suevi were so fond and careful of their horses that in order to save them they were in the habit of dismounting in their fiercest engagements with the Romans, their horses being so trained that they would stand perfectly still until their masters were ready to mount them. How much the brave and patriotic Parthians depended for centuries on the fleetness, intelligence and fidelity of their horses has become a proverb in all nations. Even their worst enemies, the Romans, could not help admiring their devotion to the horse and their wonderful dexterity in using him. It was their superior treatment of him—which they gratefully acknowledged they had learned from the Arabs—that made the Parthian horse so famous throughout the world for the almost incredible distances he could travel without food or drink when the life of his master depended on his fleetness and power of endurance; and hence the line of Propertius so often quoted—

"Quot sine aqua Parthus milia currat equus."--

Hence it was not without good reason that, among the Parthians, the greatest distinction between a freeman and a slave was, that one rode on horseback and the other went on foot.*

Referring to the treatment of their horses by the Arabs reminds us of the devotion of Bajazet to his favorite horse. After his great battle with Tamerlane—in which, after having performed prodigies of valor, he was defeated, but through the fleetness of his favorite Arabian mare had every prospect of escape—preferring to run the risk of falling into the hands of his ferocious enemy and suffering the worst tortures rather than wrong his horse, he turned out of his way to allow the animal to slake her thirst.

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flancs sont entames par des plaies et sillonnés de cicatrices faites par l'éperon; la corne des pieds est traversée par des clous, et ceux qu'on traite le mieux et dont les chaînes dorées servent moins à leur parure qu'à la vanité de leur maître, sont encore plus déshonorés par l'élégance de leur toupet, par les tresses de leurs crins, par l'or et le soie dont on les couvre, que par les fers qui sont sous leurs pieds.' "

* Justin.

In short, except among some of the baser tribes of mankind, the horse has everywhere been regarded and treated, not only as the friend of man, but also as an animal worthy of consideration on his own account, for his graceful and majestic form, and his many noble qualities. Even the Indians regarded him in this light when, on account of the conduct of his master, they had but too much reason to consider him their enemy. "These newly discovered Indians," says Montaigne in his Essays, "when the Spaniards first landed amongst them, had so great an opinion of the men and horses that they looked upon them *equally* as gods, or at least animals *ennobled above their own nature;* insomuch that some of them, after they were subdued, coming to the soldiers to sue for peace and pardon, and to bring them gold and provisions, failed not to *offer the same to the horses*, with the *same kind of harangue to them*, which they had made to the men, interpreting their neighing for a language of truce and friendship."*

But what sort of "offers" and "harangues" are made to the horse, to-day, in New York, by the tribe which may henceforth be known in equine history by the cognomen of Odiddles? It must not be supposed, however, that the initial *O* is intended by us to indicate any particular nationality, for nationality has nothing to do with the present case. Nor do we use it as an exclamation of horror; although in the latter sense, we think it will be found abundantly appropriate. Certainly many a livery horse, if possessed of the gift of speech, might well exclaim "O! Diddles!" But he is not so gifted, and that is the difficulty. If he could only tell his master how he is cheated out of his food—and how he is kicked or belabored with whatever weapon happens to be at hand if he makes an unseemly noise, at the sound of oats, when Odiddle's own horse, or the horse of some one who wants to *see* him fed, is getting the sort of food to which all are entitled and for which every owner pays Odiddle to the last penny—then it would not be necessary for us to make the present appeal in his behalf. Nor would he need any skill in rhetoric, or logic

* *Essais* de Michel de Montaigne, chap. xlviii.

he might well discard tropes and figures and confine himself to the hard facts. If he could relate his grievances his narrative would run somewhat as follows:

"I am not a greedy animal, still less am I an epicure. I am willing to eat any sort of horse food that is not dirty, or so far decayed as to have a bad smell, and I never complain as long as I get enough, or even half enough. But you expect me to have life and spirit in me, and so I would if I only got one third of the oats for which you pay. Remember that while I was where I got the oats you could hardly restrain me from prancing and bounding. Now, if I can go in an easy trot it is the most I can do. The Odiddles, I know, say that it is because I am sick; that I am off my feed from too much oats, etc. It is, indeed, true that I am not well; it is also true that I am 'off my feed;' but want of oats, not too much oats, is the cause. What I get too much of is 'soft feed;' all sorts of cheap, disgusting slops, kicks and blows!"

This may seem to do injustice even to the Odiddle tribe; but such is really not the case. It would be impossible to exaggerate or burlesque their style of horse "keeping." One would think that "the rudest portraiture of man" would consider that he had wronged the poor animal sufficiently by cheating him out of his food, without giving him any further maltreatment; but we have known horses that had to be sent to the country for months, in order that they might recover from the effects of downright physical cruelty; others we have seen with the mangled, swollen, bleeding eyebrow completely closing the eye, so that the poor sufferer was at once disfigured and rendered unfit to be brought out of the stable. We can also bear testimony to the fact that on one occasion when the owner inquired how the animal had been thus injured, the only explanation he received was coarse, profane language and abuse! Historians tell us that there was a tribe of Scythians who, when they came short of provisions, bled their horses and drank their blood—hence the well-known lines—

"Hither the Scythian also steers his course,
Gorged with the juices of his bleeding horse." *

* Venit et epoto Sarmata pastus equo.
Martial, *Spictac.* Lib. iii, 4.

Surely the ancient Scythian, who was suffering in the field, in time of war, was more excusable for bleeding his horse and drinking his blood in order to save himself from starvation, than is the modern Scythian, who bleeds the animal both literally and metaphorically, through no other motive than base greed for money.

Yet the tribe under consideration are not satisfied with all they make by cheating the horse out of his food. They must make money also by his shoes; they will have him shod as often as possible, because they have a smith of their own—one willing to allow them a liberal percentage. Accordingly those who take the advice of the Odiddles would never be done dragging off and hammering on shoes, and always a whole set at a time. No "removes" for them—no mending; all shoes put on under their auspices must be "new," because mended shoes only bring half price, though often just as "new" as those charged in the bills as such for the sake of the double price!

Nay, even all this is not sufficient. The grooms and runners of the Odiddles must have their share. If not, wo to the horse, no matter what the Odiddles themselves get or take. Finally, the owner may congratulate himself, after all, when parting with the Odiddles, if his best shafts, his best cushions, or some articles of his, more valuable still, are not missing. And if they are he may just as well say nothing about them—indeed, he had better not if unwilling to hear abusive language—language not only abusive of himself, but of all the livery-stable keepers who had charge of his horse before he fell into the hands of the Odiddles. In a word, the articles missing must, according to the Odiddles, either have been stolen by the former keepers, since they are notoriously persons not to be believed on their oath! otherwise the things alluded to never existed!

It is true that for a great part of all this the owners of the horses are themselves to blame. Unfortunately there are too many who, knowing nothing about horses, allow the Odiddles to treat the poor animals as they think proper. Then the Odiddles think that because this class give them a

carte blanche all their customers should do so; and those who refuse must abide the consequences. It must be admitted that there have been some members of the Odiddle tribe, in all ages, for we find that all the principal nations of the old world passed laws for the protection of the horse against their machinations—we find, moreover, that those laws were often rigidly executed. But as, in this country, we are more likely to imitate what England has done than what has been done by any other country, we will pass over the equine laws of the Greeks, the Romans, the Parthians, and the Saracens, and only point out one or two British laws, which our legislators and philanthropists would do well to examine. Thus, there was a law enacted against the Odiddles in the first year of the reign of Edward VI., another in the thirty-first of Elizabeth, another in the ninth of Anne, another in the twenty-second of Charles II., another in the twenty-sixth of George III., etc., etc. In one of these laws—that of Charles II.—it is declared that "any person killing a horse in the night-time is guilty of felony, and liable to transportation for five years; maiming the horse incurs the penalty of treble damages." * In short, all kinds of bad treatment to the horse known in those times have their respective penalties attached to them, in some of these laws; but there are some two or three of the kind alluded to above that seem to belong exclusively to the present enlightened generation, and are said to have been invented in a certain arid district of Long Island, the enterprising inhabitants of which—alternately called vampires and vultures—introduced them, with themselves, into this city, and not into our back streets, but into some of our most aristocratic avenues, where they call their decoy establishments by high sounding "fashionable" names, and flourish, entailing new misfortunes on those of our horses subjected to their malign influence, and new disgrace on our civilization.

* 22 and 23, Car. II., cap. 7.

APOLOGETIC.

The subscribers, patrons, and friends of the NATIONAL QUARTERLY REVIEW are respectfully informed that the cause of the delay in the publication of the present number for three weeks beyond the usual time, is that the editor was seized with severe illness when the number was nearly completed, which has confined him to his bed until the present time.

They are also respectfully assured that arrangements have been made, which will obviate such disappointments in future. These arrangements will include the appointment of a regular editorial assistant.

NOTICES AND CRITICISM.

EDUCATION.

Various Catalogues, Circulars, etc., of Female Schools and Colleges.

It is not our purpose in the present issue to enter into an extended discussion of the merits or demerits of the various literary institutions which are now opening in all parts of the country. Having in the present number discussed somewhat elaborately the subject of education and referred to several schools of different grades for the instruction of males, and it being our intention in a future number to consider at equal length those for young ladies, we shall at present make but brief mention of a few of the latter to which our attention has been called. In another number we hope to be able to express our views more fully in regard to these institutions, but a passing notice is all that our present time and space will allow.

There is no subject to which we give more willing attention than that of education in all its departments, whether it be in the discussion of text-books or of other means and methods of education. Among the numerous schools, institutes, academies, etc., which are open on every hand for the instruction of our youth, there are, as in all things, many grades—good, bad and indifferent. To distinguish these several grades, to recommend the good and characterize fitly the two latter classes, is the duty of every one who has the means of thus discriminating, and a genuine interest in the cause of education. This duty we have never hesitated to perform, pointing out the excellencies of those institutions which we found to possess them, and exposing the pretensions of those which we well knew to be devoid of them. As it is a much more congenial task for us to speak words of approbation than the contrary, we had assigned ourselves the pleasing duty of speaking somewhat at length in this issue of numerous institutions which we are well assured are deserving of recognition and commendation from every friend of education. But as we cannot enter into an extended discussion of their various merits at this time, we shall merely mention a few, of which the well-known standing and reputation render any elaborate notice unnecessary. As a representative of this class of schools in New York is unquestionably that of Mlle. Rostan. The long-established reputation and well-known success of this institution are indeed strong guarantees of genuine merit, but we are able to judge more directly. From a long personal acquaintance with this accomplished educator of young ladies, we can say that her success is but the natural result of a judicious and practical

system of education, thoroughly carried out. We have also had the pleasure of attending public exercises of this school, at which we could but be impressed by their high degree of excellence, and by the high character of the ladies and gentlemen there assembled, and, like ourselves, deeply interested in those exercises. Thus our personal knowledge and acquaintance are but corroborative of the high reputation of this school and justify us in naming it as a type of the better class of female institutions in this city, including such as the efficient and popular establishment of Mlle. Tardivel.

As belonging to the same grade of school we must also mention that of the Mesdemoiselles Charbonnier. This, although not so long established in this city, and perhaps not so well known as that of Mlle. Rostan, is in every respect worthy of being placed in the same category.

Mesdemoiselles Charbonnier were educated in Paris specially to become teachers, where they conducted an institution for young ladies with marked success for five years. Compelled by the Franco-Prussian war to give it up, they came to New York in September, 1871, and opened a French boarding and day school for young ladies. Their aim is to give children in this institution the same advantages as in sending them to France. Thus far, their success has been fully commensurate with their aims and acquirements. Talent and energy devoted to the conscientious work of education will not be long unrecognized and unrewarded. Mesdemoiselles Charbonnier now number among their pupils the daughters of many of our leading citizens.

One feature of this institution appears to us especially worthy of notice. It is embraced in these words in their circular: "Convinced that elaborate or costly dresses are not suitable to young ladies whose education is not yet finished, and may distract attention from serious study, they require all their pupils to wear a simple and tasteful costume. This consists of black silk on Sundays, and of black alpaca, or any other black material, during the week."

This will strike favorably the common sense of all who have frequently seen, as we have, school girls attired as if for the ball-room, and whose thoughts and conversation, we doubt not, were much more directed to the latest style of dress and ornament than to the style of De Staël or Racine. So brief is the time allotted to young ladies in which to "finish their education," which, by the way, is about half that of the other sex, that they certainly should not have the distractions of dress to interfere with their studies. Mesdemoiselles Charbonnier will be sustained by most parents in thus not merely recommending simple toilet, but in making it a requirement of their institution. Amid so much that is pretentious and mediocre in our educational institutions, it affords us pleasure to record the establishment in our midst of an institution so deserving of success, and evidently so well appreciated.

Our remarks upon these schools are not to be understood as excluding all others from being ranked in this class. Others undoubtedly there are of peculiar and perhaps equal merit. Among those, of at least equal repute, is the Murray Hill School, conducted by Madame C. Mears and Mlle. Louise Sée, This institution is too well known to require extended comment. The qualifications and long experience of Madame Mears warrant the high estimation in which her school is held. Its continued success is evidently based upon adequate causes, and we have every reason to believe that these causes will continue in the future, as in the past, to carry on its beneficial work and sustain its high reputation.

As an additional evidence of the sensible management which prevails in this institution, we quote from its circular a paragraph in italics, similar to that of Mesdemoiselles Charbonnier: "Madame Mears specially requests of parents that the dress of their daughters may be simple and suitable for school girls." These quotations show that young ladies in these institutions are expected to perform serious labor and to dress accordingly. Whether these ladies are able to carry out this requirement we cannot say, but we are sure that too much attention cannot be bestowed upon every detail which tends to impress upon the minds of pupils the value of the brief period allotted to their education. These institutions are outranked, however, in one respect, that of pretension, although we have no reason to expect less of them on that account in performance. As an example, we quote from the circular of Miss Comstock's school, on Murray Hill, styled, "A primary, progressive, and *finishing* ladies' school for *all the sciences, languages* and *accomplishments* taught in schools of the *highest grade.*" *Verbum sat.*

There are other schools of this better class in New York of which we would like to speak, but we must limit ourselves to these examples for the present. In other parts of the country there are many similar institutions, but we cannot point to as many as we would wish of equal excellence. Of those of great pretensions and a large number of pupils, and, in some cases which we might mention, where least known, of the highest reputation, there are no fewer than usual, although we are able to discern some indications of reform and amendment. But there is one which forms a striking exception to these. Not notorious, of little pretension, and only truly appreciated where best known, is the Gannett Institute of Boston. It would indeed be strange if the modern Athens could not boast of a young ladies' school equal to any to be found in the country. But this reproach will never be cast upon her while Dr. Gannett conducts the institution, of which she is justly proud. In our last issue we gave our readers our impressions of this institute upon a recent visit to it, and we have no reason now to change them, but rather to reiterate

them, as we have found our own opinions amply sustained by those of others who are acquainted with it.

We also have before us the prospectus and circular of Cottage Hill Seminary for young ladies, at Poughkeepsie, N. Y., C. C. Wetsell, Principal. We know Mr. Wetsell only by reputation. He is well known as a thorough and successful educator of youth. By his marked ability and long experience, he seems to be well qualified to conduct successfully such an institution as is described in his prospectus. By this we see that he has an adequate conception of what a young ladies' school should be, that his aims are high, and the promise is good that these will be realized. We congratulate the young ladies who may spend their school-days upon the beautiful shores of the Hudson, even though in the shadow of the great institution—great only in name, we must add—which also looks upon the noble river at Poughkeepsie.

Confining ourselves to the class of female institutions to which we first referred, and of which Mlle. Rostan's is the type in this city, and Dr. Gannett's in Boston, we can only include one other in this brief notice, the Pittsburgh Female College. In its annual catalogue, a handsome pamphlet of fifty-six pages, we find twenty-seven names of the faculty, headed by Rev. I. C. Pershing, D. D., President, and Bishop M. Simpson, President of the Board of Trustees. A reference to the course of study shows that it is very extensive and thorough, embracing all the branches of a solid and ornamental education. It aims to be, in this respect, not only superior to most institutions, but second to none in the land. Eight years are required to complete a full course. The department of music and fine arts seems to be remarkably well sustained. It is provided with a large number of instructors, a liberal supply of the best instruments, and the nucleus of an art collection. We also notice a special feature, which is novel and worthy of adoption in other similar institutions. It is the organization of a department of "General Information," which will meet one hour each day, for the purpose of consulting leading periodicals, and discussing such questions, whether of the past or present, as will be of interest and profit to the pupil. We can but observe the breadth and comprehensiveness of this curriculum, which point to evident catholicity of management, and which cannot fail to meet the needs of any young lady, while at the same time affording the best opportunities for a complete and thorough classical or literary education. We have said frequently that a catalogue is a very fair medium from which to judge of a literary institution, and we feel certain we are not mistaken in the estimate which we place upon this college. For this reason we will extract one more paragraph bearing upon an important point. "The college was not established for private gain, but to meet a public want, and to place a finished education, with the surroundings of a Christian home, within the reach of the largest possible number of worthy young ladies" (p. 36).

We would that there were more institutions of this class in the country. We observe with pleasure every advance made in the direction of liberal culture in this age of money-getting, of peculations and panics, and hope never to be found wanting in our own duty of upholding those who are engaged in this laborious, yet not unpleasant occupation.

Oxford's Senior Speaker. A Collection of Exercises in Declamation, Recitation and Representation. For Advanced Classes. By WILLIAM OXFORD, author of "The Junior Speaker," etc. 12mo, pp. 432. Philadelphia: J. H. Butler & Co. 1873.

THIS work is the second of a series of speakers beginning with "Oxford's Junior Speaker," and to be completed by "Oxford's Book of Dialogues." We have made mention of the former in a previous number, in which we pointed out some of its peculiar qualities. Among those we recollect, are its freshness and originality; its unexceptionable moral tone and adaptability to the class of pupils for which it is designed. In these respects we find the "Senior Speaker" every way worthy of its predecessor.

Although there is no lack of books in our language called "Speakers," etc., they are by no means so excellent as to render the publishing of new ones unnecessary or the work of improvement a difficult one. This work has been undertaken by the publishers of the present volume, and with manifest good results. All teachers and friends of education will welcome their recent publications in this department of instruction. Among these we would also include the "Etymological Reader," by Epes Sargent and Amasa May.

So many points must be kept in view in the compilation of works of this class—the fitness of the selections for declamation for the age of the pupils, a certain degree of newness, their literary and moral character and their power to interest and attract the pupils, that it is not strange that success in this direction has been so moderate. Indeed many compilers, taking the ordinary selections already at hand and adding some by unknown literary favorites, have filled up their volumes with much matter practically useless for the purpose. This "padding process," the author of the present volume has endeavored to avoid, and, by exploring further the rich mass of English oratorical literature, has been able to introduce much that is fresh, and yet well adapted to the purpose. We find little that cannot be practically employed in the varied exercises of the school-room. The selections are of a length suitable to the capacity of older pupils, and mainly of a lofty and dignified character, yet of great

variety, as may be seen by consulting the list of authors ranging from Shakespeare to Mark Twain. We find few names of mediocre authors inserted on the "mutual admiration plan," and none of an exceptionable character. It consists largely of declamations of a political and patriotic character, but contains few of the dramatic class. These, we presume, are mostly reserved for the Book of Dialogues.

The illustrations form a not unimportant feature of this work. They not only serve as embellishments but as auxiliaries to the work of instruction, being many of them good portraits of distinguished orators and authors. Comparatively little space is devoted to "elocution as an art," but the directions are intelligible and practical. Throughout the work, emphatic words are italicised and brief explanatory notes introduced.

A Condensed Etymology of the English Language. For Common Schools. By Wm. W. Smith. 12mo, pp. 195. New York: A. S. Barnes & Co.

School books are manufactured on so large a scale at the present day that none can pretend to examine one-tenth of them. We sometimes find among the rubbish we had thrown aside, for covering trunks and kindred purposes, a "text book," which escaped our attention when first placed on our table. Taking it up by accident while searching for a lost manuscript, or proof sheet, we open it, and discover it to be quite a curiosity in its way; although it contains nothing that surprises us—nothing more "curious" than had reached us from, perhaps, the same source before. The "work" now before us is one of this class; and accordingly we will turn over a few of its pages, believing that the matter they contain will amuse if not instruct a portion of our readers.

In the publishers' grand announcement of the "National Series of Standard School Books," we notice among the numerous works of which "bare mention only can be made," "Smith's Etymology from every source of language." This may throw some light upon the work under consideration. Yet we are left somewhat in the dark, as to whether Mr. Smith has consulted "every source of language" in compiling the volume, or whether the etymology of the English tongue is derived from "every source of language." To say the least this is a very comprehensive expression to employ in reference to a work for "common schools" in which a few words are traced to their origin in Latin, Greek, Anglo-Saxon, etc. In reality this is saying more for the work than it deserves. The naming of a few roots, with a brief list of words derived from them, without in any manner tracing the deriva-

tion, connection, and the subtle, yet striking, ties which bind together the different families of words, is a very incomplete etymology even for common schools. To one possessing a considerable degree of knowledge upon the subject, the connection between the root and derivation as here given is frequently very obscure, but to the youthful student, it must, like certain creeds, be taken solely on faith.

No subject can be made more interesting to even the youngest pupils, but, as here presented, we can conceive of none more dry or unedifying. For example, from *do*, *datum* are given the derivatives *add*, *condition*, *date*, *edit*, *render*, and *surrender*, without a word of explanation! It is easy to judge how lucid this is to the youth in the common schools, to say nothing of the force of the words given as illustrations, or of those of much more direct derivation which might have been given. This employment of obscure and indirect derivatives instead of those evident and instructive is a palpable defect in the work, granting that the derivations are correct, which we find is far from being the case. Thus, to illustrate rule VI, for spelling, the pupil is informed that from *palace* and *solace* are derived *palacious* and *solacious*, which, at the best, are obsolete terms. Indeed these rules strike one as having been taken at random and the examples made to order.

Under the head of Latin prefixes, occur some amusing "derivations" and "definitions." Thus *append* is derived from *pend*, instead of the present indicative *pendo*, or the infinitive *pendere*, the forms which grammarians agree in employing in reference to Latin verbs. How extremely edifying to the common schools must be the following, taken from page 28 of this "etymology from every source of language" (!) "*Publish*, from *vulgus*, to make public" (!) In the first sentence of his preface, the author hazards the statement that "All the Etymologies of the English Language heretofore published have been confined merely to the words derived from Latin and Greek." We may be allowed the suggestion that had the author paid a little more attention to the "Latin and Greek" he would not have derived *publish* from *vulgus*, but from its obvious source, *publico*. We hope the author does not consider his work published in the *vulgus* or vulgar sense of the term. Some of his "definitions" are equally incomprehensible, as *corrode, to gnaw together*. *Efface, to take out the face*, and among the Anglo-Saxon derivatives in which this work excels all other etymologies, is *board, to live at for a price*. In order to render these definitions more lucid, frequently a note is added, like the following: "Light, not heavy. This word accords with Light, *the fluid in orthography*." How much "*light*" is thrown upon the subject by this note we will not attempt to say. Yet occasionally we meet with an instructive remark. For example—"The word *feoh* is one of the oldest in all the European languages. Cattle was the first kind of

property; and by bartering, this word came to signify money in general." This, however, is a quotation from Bosworth. We see the same illustration of history crystalized in language in the Latin *pecus*, a herd of cattle, and *pecunia*, riches, whence is derived pecuniary, as from *feoh* comes fee, etc. Indeed no study can be more entertaining as well as instructive, than this tracing the pedigree of words and observing the flood of light which a simple fact in philology frequently throws upon the customs and history of a whole race. But in this work, which claims to supply the deficiencies of "all other etymologies," the performance comes notably short of the promise. We look in vain for any farther information "for common schools," until without a word of preparation we are plunged into an enumeration of the works and merits of the National Series of School Books, the prominence of which demands brief attention.

The publishers inform us upon the first page of the present volume that "no other series ever claimed to be as complete as this." If completeness consists in undistinguishing comprehensiveness including works of every kind and character, good, bad and indifferent, this claim will doubtless not be disputed. We thus refer to the series because it is the first point which challenges attention upon opening the volume under consideration. In fact, this is the case with each. Whether designed for young or old, for the infant school or the college, one and all give prominent space to singing the praises of the "National Series." Thus, in this "condensed Etymology for common schools," containing only 195 pages, *twenty-four* pages are devoted to the enlightenment of the common schools as to the superior excellencies of these remarkable text-books!

Then, upon the outside page of the cover are expounded the merits of a series of mathematics, to which is appended the apparently innocent statement that "keys may be obtained from the publishers *by teachers only.*" This reminds us of certain circular letters issued from enterprising parties, which, after descanting in glowing terms upon the advantages of wealth, the means of obtaining it, etc., append the interesting statement that from the undersigned fifty dollars may be obtained for five, with directions as to disposing of the "queer," etc. We would not compare such publishers to issuers of counterfeit money, yet, so far as the practice alluded to is concerned, they enter into a conspiracy with incompetent teachers to enable them to defraud and impose upon pupils and parents, and so far, at least, are to be classed in the category of those who endeavor to obtain something for nothing, or fail to render an equivalent for value received. The announcement "keys may be obtained," etc., in plain language is simply this: teachers, or those pretending to be such, who do not possess the ability or disposition to teach, by collusion with the publishers may obtain keys to these works, by which they can

pretend to teach what they do not know, and to prevent parents and pupils from detecting the imposition the publishers announce that "keys can be obtained *by teachers only*."

This is but a fair interpretation of their language to those who are not familiar with the "ways and means" employed by certain educational publishers to increase their sales, to the injury of those whom they are supposed to supply with mental pabulum. From one such fact it is easy to judge whether the publishers have in view the interests of education or the "almighty dollar." In conclusion, we would offer an amendment to the title of the present work. It would then read: "A condensed Etymology of the English Language, and diluted puff of the National Series."

BELLES-LETTRES AND HISTORY.

Old Rome and New Italy. (*Recuerdos de Italia.*) By EMILIO CASTELAR, author of "The Republican Movement in Europe," Translated by Mrs. ARTHUR ARNOLD. 12mo, pp. 301. New York: Harper & Brothers. 1873.

THE eloquent Spanish orator and ardent republican, Emilio Castelar, is comparatively well known in this country as a contributor to some of our leading papers and periodicals. The present work is written from a Spanish standpoint for a Spanish public, but has been deemed worthy of translation and republication by the publishers, and we think the public will approve their course. It is not the subject alone, but the point of view, which constitute its chief value to American readers. The Spaniard's republican spirit and hatred of oppression and injustice is aroused at nearly every step in Italy. Upon first touching its shores he can but contrast its oppressive custom regulations to those of free Switzerland.

Yet his detestation of absolutism does not lead him to forget his early teachings. The orator is also a poet, and his descriptions of many of the scenes to be found in old Rome and new Italy are often eloquent and full of poetic fire. Yet the chief value of the work, as we have indicated, lies in the republican standpoint of the writer. His just and impartial manner of treatment is eminently noticeable in his description of the Ghetto—the Jews quarter of Rome. For although the tyrannical restrictions which surround this people have been much mitigated under Pius IX, they are still many and severe. Certainly, in respect to this race, there are few nations called Christian but have cause to blush for their acts of cruelty and injustice. To-day traces of this prejudice and proscription

linger upon the statute books and in the customs of many nations. Even in enlightened England but recently have any of the Hebrew race been allowed to aspire to its higher offices. In Rome, where other forms of Christian worship have been so long prohibited, the Jews receive much less toleration. The calm yet earnest language of truth and justice which the spectacle of their misery in the Eternal City calls forth from the Spanish orator we might commend to many who seem to forget the wonderful history of this peculiar people and the world's indebtedness to them. He says: (p. 259) "It is impossible to understand why the Jews should be outraged in this manner—impossible. Even polemics are difficult between them and Christians. We believe all the principal Jewish dogmas. Their God is our God, their law our law, their Bible our Bible. We have added the Gospel to the Old Testament; to the monotheistical God of the Shemitical desert, the word and the spirit of Grecian metaphysics."

Certainly every enlightened and unprejudiced mind will agree with him when he says: (p. 261) "It is time for all persecutions against opinion to be abolished. I condemn the Roman Government when it oppresses the Jews, and the Government of Prussia when it proscribes the Jesuits. I assert that to persecute doctrines is like the persecution of light, air, electricity, magnetic fluids; because these escape all persecution, and are placed above all power."

The world will be better, wiser and happier when it can act according to the spirit of the words with which the writer closes this chapter: (p. 263) "Let there be no more accursed races upon the earth. Let every one act according to his conscience, and communicate freely with his God. Let thought be only corrected by the contradiction of thought. Let error be an infirmity, and not a crime. Let us agree in acknowledging that opinions sometimes take possession of our understandings quite independent of our will or desire. Let us be so just as to be enabled to see even to what degree each race has contributed to the universal education of humanity."

This work of Mr. Castelar's is not a book of travels, but, as he tells us in his preface, is a record of the lively emotions awakened in his soul by the marvelous spectacles of Italy. He says truly, a journey to Italy is a journey through all periods of history; and he has endeavored to keep always in mind, that above these great works of art, of archæology, history is visible. With this aim the work is a success, and on this account is worthy a place among the numerous volumes upon this ever fruitful theme.

Our Western Home. A Story from Life. By the Author of "Twenty-five Cents," etc. 16mo, pp. 175.

Review Exercises in the Sunday School. Their Value and Methods. By Rev. H. Clay Trumbull. 16mo, pp. 106. Philadelphia: American Sunday School Union. 1873.

Among so numerous publications as those of the American Sunday School Union, it is not to be expected that all will reach the same standard of excellence in literary merit, this being made subordinate, if necessary, to the purpose of moral instruction. We are of opinion, however, that these can in most cases be combined. Yet where the latter is unquestionably of greater moment, as in these volumes, we are not disposed to be over critical in regard to the former.

The first of the books above named, "Our Western Home," although styled "A Story from Life," smacks somewhat of the unreal. The moral is good, showing what can be accomplished by steady Christian purpose for the benefit of others, although the narrative and the moral do not always run smoothly together. The former is very simple. A young man with his wife and child leave the city to begin life anew in the West, upon the outskirts of civilization. They take with them a pair of newsboys from the city, who under their kind care develop into model young men. But their Christian efforts are directed mainly toward an unpromising subject, the western savage. "White Crow," a young chief, is first brought under their influence through the kindness of little Minnie, and finally converted to Christianity, with a number of his tribe. The story has but little incident, the most striking being that of "White Crow's" nearly perishing in a snow storm on his way to attend a prayer meeting. We fear he can hardly be a sample of "the poor Indian." As we have said, the moral is good, showing what sincere piety can perform under adverse circumstances, and the story is not without interest.

"Review Exercises," by Mr. Trumbull, is written to show the value and best methods of conducting these exercises in Sabbath school instruction. The writer is a gentleman of long experience in Sabbath school work. He has embodied in this small volume many valuable suggestions, as to when and how to review, and different plans of carrying out this important method of instruction. The whole concludes with a chapter on the Antiquity of Reviews, citing Biblical authority for their use, and illustrating, from Scripture, the truth that "men are but children of a larger growth," as shown by the frequent repetition of commands and "reviews" in the Divine dispensation.

Both of these works, the latter especially, will be valuable additions to Sabbath school literature, and efficient auxiliaries to its course of instruction.

The Perfect Horse. By W. H. H. MURRAY. With an Introduction by Rev. HENRY WARD BEECHER; and a Treatise on Agriculture and the Horse, by Hon. GEORGE B. LORING. 12mo, pp. 472. Boston: James R. Osgood & Co. 1873.

THE popular pastor of Park street, Boston, already well known by his description of the Adirondacks and their piscatorial pleasures, in the present volume appears before the public on a somewhat novel subject for a minister. He seems to be aware of this, and speaks a word of self-vindication in his preface. The introduction by Mr. Beecher, which is a brief note to Mr. Murray, also expresses approval of the Rev. author's love of "fast horses," and deems the publication of this work "but pursuing a remote department of his profession."

Setting aside the question of propriety, Mr. Murray has certainly written a book which will benefit all who read it. And to the large class in all ranks and professions of life who love and admire the horse, it is rich in instruction and valuable suggestions. The subject becomes dignified and refined in the author's hands, and is treated in a spirit as far removed from that of the turf as the latter is from the pulpit. Mr. Murray's standard of the "perfect horse" is not merely the animal which can "go" the fastest, but, to quote from his elegant description of the "Morgan horse," it is the one which possesses, to the highest degree, beauty, docility, endurance and speed (p. 302).

In regard to this animal, the work teaches how to know him, how to breed him, how to shoe him, and how to drive him. Full of valuable suggestions in these particulars, it deserves the perusal of all who have anything to do with horses. Especially, the author's plea for kindness and common sense in their treatment is worthy of adoption. This work is, on Mr. Murray's part, plainly a labor of love, and, embodying as it does the result of years of careful reading and actual experiments, it must be of great value to all breeders and trainers of this noble animal. It contains illustrations of the best trotting stock-horses in the United States, with their pedigrees, records, and full descriptions. It is written in a clear, candid and practical style, rising at times even to a degree of eloquence when the author speaks of the object of his love, the perfect horse.

ART.

Studies in the History of the Renaissance. By WALTER H. PATER, Fellow of Brasenose College, Oxford. 1 vol., 8vo, pp. 213. London and New York: Macmillan & Co. 1873.

MR. PATER has the audacity—we commend him for it—to say to us that certain items of our knowledge are without foundation; are

deceptive, are false; that what our fathers taught us, and we are teaching our children, is not so near the truth as had so generally been supposed. We must either give ground or take it; persist longer in obdurate obedience to the past, or, acknowledging our waywardness, our credulity, our lack of intellectual strength, utterly secede from popular fallacies and speculative notions, and become disciples of Mr. Pater.

When we affirm that the author is a genuine scholar, careful of speech and liberal of thought, writes in a manner and style peculiarly interesting—a style whose rhythm flows onward in unbroken measure, as the water of a rivulet over a sandy bottom; bold, decisive, marked by wonderful perspicuity and ease, often abbreviated, always comprehensive, and rarely hidden and unintelligible in its interpretation; in brief, a style fascinating to a high degree and redolent of sunny Italian reminiscence,—we have said all that needs to be said on this subject.

The subject, of which Mr. Pater treats, is the Renaissance. It will the better serve our purpose to pause for a moment and to regard the term, the age, the renewed activity, or whatever else the reader may choose to call it, from a popular standpoint, before entering upon an examination of Mr. Pater's ideas, as expressed in his recent volume.

Christian art began with St. Luke and ended with Angelico da Fiesole. Venus was still worshipped in her temples after the Madonna had been painted. After Angelico da Fiesole, Christian art was stifled in the efflorescence of dramatic and of natural art. It was not alone the Renaissance, so called, which revived Christian art: it was nature also, that nature whose grand and glowing expression found at length its artist in Leonardo da Vinci. It was the marriage, so to speak, of art and nature, profound, mysterious, infinite love, the light in darkness.

Bossuet once remarked, when speaking of this subject, that "Everything was God except God himself." Almost the same sentiment might be applied to Christian art. The Church concealed nature and expanded the shadow over the very face of the man. Thus the likeness of God no longer shone. Moreover, love hid itself, and then repented at the first caress. The world prostrated itself upon the tomb, because the tomb seemed the gate of heaven. It seemed not to comprehend that God had imposed life upon it,—an ordeal which has its hours of joy, of love, of effusion of heart sentiment.

The Renaissance which, in reality, was the close but adulterous alliance of Christian and of antique art, gave rise to dramatic art, or the art of pomp and parade, whether it was sacred or profane, whether it represented the *School of Athens* or the *Marriage at Cana*. It was the art *par excellence* of the Italians. It was likewise the art *par excellence* of the French from the first achievments of the meditative Poussin to the final efforts of the impetuous Delacroix, from the *Wars*

of Alexander to the *Rape of the Sabines*. Regarding art, in its theory as related to its primal origin, we find that Egypt was the idea, Greece the beauty. The mediæval age was the soul, or the innate life; the Renaissance was the theatre or dramatic display. Finally, modern art is nature.

The Renaissance, the second birth, the regeneration, the revival. Generally speaking, what was it but a term used to signify the return of classical learning after a long absence, an almost utter oblivion? A return usually assigned to the fifteenth century, because, then, its manifestations were gorgeous, glowing and sublime. Regarding the Renaissance as analogous with regeneration, we must admit a common error in the supposition that the Renaissance was sudden, surprising, unforeseen, unheralded. An eminent writer has likened the activity of the Renaissance period to a thunder-bolt, a flash, an awakening appeal of the natural elements; in other words, a birth characterized by no previous gestation, whose conception even cannot be traced back to prior years. Such a birth might, at least, be pronounced an anomaly; but the very idea, when philosophically considered, is vague, meaningless, and inconsistent even with itself.

Now, we are disposed to interpret the Renaissance in a manner, perhaps, even more distant than is that of Mr. Pater, from popular views. While admitting that Renaissance is probably synonymous with regeneration, we prefer to assign to it a progressive movement, and to regard it as an activity always going on, always advancing. It was not a momentary birth, a sudden effusion of a flood of light, which penetrated into the deepest and most hidden recesses, an "air-line God-send," as says an Italian writer; on the contrary, it was a gradual, progressive, and ever-increasing triumph of light over darkness, a labor of human elements, so to speak, a wrestling of the powers of ignorance, credulity, bondage, with the stronger-armed powers of knowledge, hesitation and freedom. It did not remove the coverlet from buried secrets of its own accord, but it directed and impelled humanity so to do. We have caught our fullest meaning when we allege that the Renaissance was an inspiration; an inspiration by God, of course; an out-pouring of the heavenly spirit, an infusion of divine radiance, divine sympathy, divine guidance into the sin-stricken, blind and fearing minds of men.

It would be rash, indeed, to assign this Renaissance, so-called, this inspiration, in reality, wholly to the space of time included within the fifteenth century: in other words, to give to it a limitation. It would be far better to trace its beginning away back into the dark ages, where it properly belongs; and then, *à priori*, to follow it onward as, day by day, its effects become more marked and more overpowering—onward, even to the present time.

If we examine, or look into, the period just preceding the fifteenth

century, we shall find that national idioms, partially formed, indicated the existence of nations, and already were giving origin to distinct literatures. The moment when the middle age ceased is precisely that when ancient literature and models demanded and obtained the attention of the moderns. Two great writers, Petrarch and Boccaccio, helped to destroy the longer existence of the middle age. The former had studied the language of Greece, and the latter had listened to a private recitation and interpretation of Homer. The impulse which had been gradually gaining strength by its own existence, was calculated to bring about most glorious results. Ancient manuscripts were unearthed; translations were made; schools were opened, and universities were founded. Classical learning was sought, slowly acquired, and held in universal esteem. Society was composed of numerous elements, each one of which appeared to be working in a different mood, manifesting varying results, but all directed to the same glorious end.

In furtherance of his doctrines, Mr. Pater has selected from the field before him eight subjects, nearly akin and still marked each by a distinct phase of character, or of the humanizing spirit of the age. His first effort is a brief but careful examination of the story of *Aucassin and Nicolette*, written in the French of the latter half of the thirteenth century, and edited, from a unique manuscript, still preserved in the national library at Paris, by an eminent modern critic. The writer himself calls the piece a *cantefable*, a tale told in prose, "but with its incidents and sentiments helped forward by songs, inserted at irregular intervals."

Dante relates how the tyranny of the "Lord of terrible aspect" became physical, blinding his senses and suspending his bodily forces. Dante is but the type of experiences felt in a passionate age. In the story before us, Aucassin represents this ideal intensity of passion—

> "Aucassin, li biax, li blous,
> Li gentix, li amorous;—"

the very image of the Provençal love-god, no longer a child, but a pensive youth. Our author is of opinion that antinomianism, or the base disregard of law and of good works, was one of the strongest characteristics of what he terms a mediæval Renaissance. To a certain degree, we concede this. The apostles, inspired of God, held up a primitive Christian ideal. But in later ages, people, in their mad search after physical beauty, sensual pleasures, and prone to bodily worship, were often impelled beyond the bounds thus set. Religion assumed the form of an idolatry, not, indeed, of dead, carved images, but of beauteous, living, breathing natures. This element in the middle age is impressed upon the history of Abélard and Héloïse, and upon the legend of Tannhäuser.

The more we scrutinize the middle age, the closer we discern the changes constantly appearing in a strange confusion, we find this element rising to the surface. The effects of the Renaissance, the inspiration, as we have ourselves termed it, are becoming more widely and deeply felt. As water falling into a glass jar displaces the air therein accumulated, so the potent, heavy, subduing forces of the Renaissance, sinking gradually to the bottom of, and filling, men's minds, caused the elements of confusion, discord, and of this same antinomianism, to give way, to rise to the surface and to depart forever. The story of Aucassin and Nicolette is filled with this spirit of love-worship—sufficient evidence, we imagine, to certify the age to which it belongs. We are inclined to side with Mr. Pater in his assertion that the Renaissance began in France, that is, that Renaissance in progress within the limits of the middle age.

In his chapter entitled "Pico della Mirandula," Mr. Pater cleverly discourses of the attempt made by certain Italian scholars of the fifteenth century to reconcile Christianity with the religion of ancient Greece. Pico della Mirandula, who was one of these scholars, came to Florence, after many wanderings, in 1482. Florence had always had an "affinity for the mystic and dreamy philosophy of Plato, while the colder and more practical philosophy of Aristotle had flourished in Padua and other cities of the north." M. Renan has clearly pointed this out. Now Pico was a man of erudition, and was possessed of an unrivalled thirst for knowledge. From Florence he went to Rome, where he offered to defend nine hundred bold paradoxes, drawn from the most opposite sources, against all comers.

It were pleasure to give prominence to some of the remarks made by our author when speaking of Aandro Botticelli, who possessed "the freshness, the uncertain, and diffident promise which belongs to the earlier Renaissance itself, and makes it, perhaps, the most interesting period in the history of the mind;" and the study of whose work causes one to begin to understand to how great a place in human culture the art of Italy had been called. Also, to give more than a passing notice to Lucca della Robbia, whose system of art came midway between the system of the Greek sculptors and the system of Michael Angelo, and partook of what Winckelmann terms the *Allgemeinheit* of the Greeks—that is, their breadth, generality, universality, and of the studied incompleteness of the great Tuscan artist.

When will the world in general begin to understand that sweetness was one of the great qualities of the disposition and style of Michael Angelo? And, *apropos*, when will it also discern this same genial quality in the writings of Victor Hugo, since it does exist therein as truly as light itself. "When one speaks of Michael Angelo," says Grimm, "woods, clouds, seas, and mountains disappear, and only what is formed by the spirit of man remains behind." The natural

world seems hardly to have an existence for him. In the words of our author, "he has traced no flowers like those with which Leonardo stars over his gloomiest rocks; nothing like the fretwork of wings and flames in which Blake frames his most startling conceptions; no forest scenery like Titian's fills his backgrounds—but only blank ranges of rock and dim vegetable forms as blank as they, as in a world before the creation of the first five days."

It is unnecessary to trace the career of this great man from the beginning onward through its varying stages of luck, or misfortune. Almost every one is familiar with the *history* of the man; but the man himself—how vague, how mysterious, how unapproachable he seems to us! There is a great deal of sunshine, but still more of shade. We discover his strength with readiness, but the bitterness of it is apparent only after deeper searching. The best characterization of the man is in the words of Raphael: "He treats the pope as the king of France himself would not dare to treat him; he goes along the streets of Rome like an executioner." The more we read of him he seems the more to have belonged to that number who incur the judgment of Dante, as having *wilfully lived in sadness*. "But his genius is in harmony with itself, and just as in the products of his art we find resources of sweetness within their exceeding strength, so in his own story, also, bitter as the ordinary sense of it may be, there are select pages shut in among the rest—pages one might easily turn over too lightly, but which yet sweeten the whole volume. The interest of Michael Angelo's poems is that they make us spectators of this struggle; the struggle of a strong nature to adorn and attune itself; the struggle of a desolating passion, which yearns to be resigned, and sweet and pensive as Dante's was. It is a consequence of the occasional and informal character of his poetry that it brings us nearer to himself—his own mind and temper—than any work done merely to support a literary reputation could possibly do."

There is one epoch in the artist's life which blooms like a rose in the desert, which shoots forth a radiance—like that of a meteor falling in a dark, starless night. It is the epoch of his acquaintance and half-distant intimacy with Vittoria Colonna. In this brief space—from 1542 to 1547—the life-long effort to tranquilize his vehement emotions by withdrawing them into the region of ideal sentiment, becomes successful, and the significance of Vittoria in it is, that she realizes for him a type of affection which even in disappointment may charm and sweeten his spirit. Wherein is the artist inferior to the poet of the "Divina Commedia," in the following sonnet addressed to Vittoria?

"Bring back the time, when blind desire ran free,
With bit and rein too loose to curb his flight;
Give back the buried face, once angel-bright,
That hides in earth all comely things from me;

Bring back those journeys ta'en so toilsomely,
So toilsome slow to him whose hairs are white;
Those tears and flames that in our breast unite;
If thou wilt once more take thy fill of me!
Yet, Love! suppose it true that thou dost thrive
Only on bitter honey-dews of tears,
Small profit hast thou of a weak old man.
My soul, that toward the other shore doth strive,
Wards off thy darts with shafts of holier fears;
And fire feeds ill on brands no breath can fan."

Michael Angelo has not unfrequently, been termed a disciple of Dante. More properly may we call him a disciple of Plato. It was the Platonic tradition of the passage of the soul through one form of life after another which moulded Michael Angelo's verse. The artist is always pressing forward from the outward beauty—*il bel del fuor che agli occhi piace*—to apprehend the unseen beauty; *trascenda nella forma universale*—that abstract form of beauty about which the Platonists reason. Michael Angelo is Platonic, also, in his views of death, and he regards it with a maturity of mind, with caution and with dispassioned seriousness. "Michael Angelo is so ignorant of the spiritual world, of the new body and its laws, that he does not surely know whether the consecrated host may not be the body of Christ. And of all that range of sentiment he is the poet, a poet still alive and in possession of our inmost thoughts,—dumb inquiry, the relapse, after death, into the formlessness which preceded life, change, revolt from that change, then the correcting, hallowing, consoling rush of pity; at last, far off, thin and vague, yet not more vague than the most definite thoughts men have had through three centuries on a matter that has been so near their hearts—the new body; a passing light, a mere intangible, external effect over those too rigid or too formless faces; a dream that lingers a moment, retreating in the dawn, incomplete, aimless, helpless; a thing with faint hearing, faint memory, faint power of touch; a breath, a flame in the doorway, a feather in the wind."

The strange interfusion of sweetness and strength is not to be found in those who claimed to be his followers, but it may be discerned in many who preceded him; it may, unaware, be found in William Blake and in Victor Hugo. By these we are assisted in understanding him, while he, in turn, justifies and interprets them. Who will say that this is not the chief use in studying the old masters?

The remaining pages of Mr. Pater's volume are devoted to a careful consideration of Leonardo da Vinci, the painter, who, for all succeeding ages, fixed the outward type of Christ. Our author reviews the life of his subject with a peculiar degree of admiration and respect. His *legend*, as the French say, seems to stand out in bold relief. The story is old, oft repeated, and familiar. But never before do we remember to have read a characterization so full of truth, so cordial

of sympathy, so dispassionate, so overflowing with tenderness and with a friendly love for the man. Leonardo has been too often abused. The faults of the age were his faults, he partook of a share only; but, notwithstanding all that, he was one eminently fitted for his calling, a true artist, who labored in sincerity and truth.

We regret that we must close our remarks here. Our limited space will not permit of even a brief consideration of the merits of Joachim du Bellay, who struck the first note of the literary revolution in France, and should be remembered as having belonged to the famous Pleiad of French poetry. The last chapter in the volume before us is devoted to Winckelmann. In his preface, Mr. Pater remarks that "Winckelmann, coming in the eighteenth century, really belongs in spirit to an earlier age. By his enthusiasm for the things of the intellect and the imagination for their own sake, by his Hellenism, his life-long struggle to attain to the Greek spirit, he is in sympathy with the humanists of an earlier century. He is the last fruit of the Renaissance, and explains in a striking way its motive and tendencies."

We have attempted to present a faint idea of Mr. Pater's work. Within the limits of about two hundred printed pages, he has presented to his readers a most delicious feast. He has furnished food for digestion, food such as is always acceptable to him who is in love with the subject. However we may choose to differ from him on certain points, we must acknowledge him as a careful thinker, a judicious critic, and a scholarly writer.

SCIENCE.

The Atmosphere. Translated from the French of Camille Flammarion. Edited by JAMES GLAISHER, F. R. S., Superintendent of the Magnetical and Meteorological Department of the Royal Observatory at Greenwich. With ten cromo-lithographs and eighty-six wood cuts. 12mo, pp. 453. New York: Harper and Brothers. 1873.

"*In eâ vivimus, movemur et sumus,*" is the appropriate motto of the author at the head of his preface. We live and move and have our being at the bottom of an etherial sea, reaching over the whole world. The atmosphere is the most common and at the same time the most inestimable of nature's gifts to man, and yet, not until compara-

tively recent times has it received the degree of attention and investigation which its universality and importance demand. From the time of the Chaldean shepherds, men have eagerly watched the distant stars and endeavored to trace in their mysterious movements good or ill to humankind; but the air which they were unconsciously breathing, fraught with unnumbered influences upon man and all that relates to him, was comparatively unobserved and unknown. The winds blew as they listed, but none knew whence they came or whither they went. Nor is this fact inexplicable. This subtile, invisible fluid escaped all known means of detection and analysis. Not until ages of chemical experiment had revealed the elements of matter, and the whole circle of physical sciences had advanced to a high degree, could this most common of substances be analyzed and its connection with animal and vegetable life be established. Even the most subtle of all fluids, electricity, had to be subdued and applied in the telegraph, before the modern science of meteorology could begin to tell the course of the winds. Indeed, we yet see the infancy of this science, but the results already obtained by our "weather department" promise that men may not only know whence the wind cometh, but predict whither it goeth, and its numerous effects. As M. Flammarion observes:

"The science of the atmosphere is the question of the day. We are just now, in regard to this study, in an analogous situation to that of modern astronomy in the days of Kepler. Astronomy was founded in the seventeenth century. Meteorology will be the work of the nineteenth." (Preface, p. 6.)

This work of M. Flammarion embodies not only all that is now known upon this interesting and important subject, but also a large amount of information in regard to the kindred subjects of light, heat, electricity, etc. The subjects treated of will be better understood by a note of the contents: Book first treats of our planet and its vital fluid, including the chemical components of the air, sound and the voice, and aeronautical ascents. Book second discusses light and the optical phenomena of the air, including the rainbow, specter-shadows, the mirage, shooting stars, and the zodiacal light. In book third, we have much valuable information upon the temperature of the air, climate, distribution of temperature, etc. Book fourth explains the wind and its causes, touches upon sea currents, and includes a very interesting account of variable and special winds, the simoon, hurricane, waterspouts, etc. Book fifth treats of the water upon the surface of the earth and in the atmosphere, including the clouds, rain, hail and prodigies, such as showers of blood, frogs, fish, etc. Finally, in book sixth is discussed electricity, thunder storms, and lightning, the jack-o'-lanterns and aurora borealis.

Thus it will be seen that the subject is remarkably fruitful, and that the learned author has not hesitated to introduce whatever was germain to the subject and might serve to illustrate it. Indeed, such

is the interconnection of all the physical sciences resulting from a still stronger connection in nature, that it is impossible to write well upon one department of science without introducing others; and we may add, that no one is competent to write upon one unless acquainted with all. But this charge cannot be brought against M. Flammarion. This is evident from a note of the editor to the effect that the French edition is of more than twice the extent of the present volume, containing 824 pages of closely printed matter. Consequently the editor has been obliged to compress many chapters and to entirely omit one or two having more remote connection with the subject. The work is written in the popular style, or, as Mr. Glaisher expresses it, contains much "fine" writing which he regards as ill according with the precision and accuracy which ought to be characteristic of scientific information. Consequently, he has taken the liberty of toning down many passages; still the style is sufficiently vivid to render it generally attractive, and at the same time it possesses the accuracy of statement pertaining to a truly scientific work. The contents are also of deep importance to all classes of persons, especially to the observer of nature, the agriculturist, and the navigator. Where there is so much of valuable information and interesting statement, it is difficult to select a specimen paragraph. In a work of so vast and varied contents, the brief extracts which our space will allow might appear much like the brick which the old humorist carried about as a sample of his house. However, we will select a brief paragraph on the simoon, as illustrative of the more popular style of statement:

"The simoon is preceded by a black spot, which rises in the horizon. This spot grows rapidly larger. A murky veil obscures the sky, gusts of sand darken the sun and dry up all verdure. As soon as it begins to blow, birds fly off affrighted; the dromedary seeks a bush to protect him from the sand; the Arab covers his face, rubs his body with grease or wet mud, and lies on the ground or hides himself behind a tree until it is over. In 1805 the simoon buried in the sand a whole caravan, causing the death of 2,000 men and 1,800 camels. The impalpable dust which the air carries along in thick clouds enters the nostrils, the eyes, the mouth, and the lungs, and causes asphyxia. When it does not absolutely kill, the rapid evaporation from the surface of the body dries up the skin, inflames the throat, makes the breathing rapid, and produces violent thirst. The terrible blast of the simoon dries up the sap of trees in its passage, and causes the water contained in the skins carried by the camels to evaporate. The caravan is then a prey to horrible thirst, which sets the blood on fire, and the route which they follow is strewed with the whitened bones of men and animals who perish for want of water." (p. 322.)

The work is illustrated with the characteristic profuseness and skill of the Harpers. The chromo-lithographs not only beautify the volume but aid materially in conveying vivid impressions of the subject.

This work takes a place beside the "Earth" and "Ocean," of M. Reclus, and together they form a necessary addition to every well-selected library.

Enigmas of Life. By W. R. GREG. 12mo, pp. 332. Boston: James R. Osgood & Co. 1873.

SOME will object to this book on account of its boldness in dealing with religious creeds and dogmas. Indeed, some will regard the author as a decided "infidel," although he avows a strong faith in the fundamental doctrines of Christianity. But let his faith be what it may, we see no reason why he should not be read, since he is undoubtedly an original thinker, as well as an attractive writer. We have no more right to exclude a modern book on account of its faith, or lack of faith, than we have to exclude an ancient book, on the same ground; and he must be but an indifferent Christian—one whose faith could hardly be called strong—who is afraid that his creed will suffer from discussion.

At all events, we trust there are not many of our readers who are thus timid. Believing that the few who may entertain some conscientious scruples as to the propriety of reading books which are overcurious in regard to the nature and origin of things, cannot feel much injured by the perusal of Mr. Greg's book, we do not hesitate to allow his views to tell their own story. We are all the more willing to pursue this course in the present instance from the fact that, far from being peculiar in his opinions, our author merely gives expression to notions, doubts, and misgivings which strongly imbue the minds of the most intelligent classes of Englishmen at the present day, and which are by no means spurned by the corresponding classes in this country.

It is worthy of remark that nowhere is our author bolder or more startling than in his preface; indeed, there is not a more ably written paper in his whole book; and by this we do not mean any reflection on the general contents of the volume before us. But let us hear Mr. Greg in his preface:

"By the severer class of scientific reasoners (if I have any such among my readers), it will, I am aware, be noted with disapproval that throughout this little book there runs an undercurrent of belief in two great doctrines, which yet I do not make the slightest attempt to prove. I have everywhere, it will be said, *assumed* the existence of a Creator and of a continued life beyond the grave, though I give no reason for my faith in either; though I obviously do not hold those points of the Christian creed on the ordinary Christian grounds; and though I cannot fail to be conscious that these questions underlie, or inextricably mingle with nearly every one of the subjects I have treated" (p. 1).

In this there is nothing remarkable by itself; it is significant only in connection with what follows. Passing over more than a page, we let our author proceed:

"The question—when stated with the perfect unreserve which alone befits it—lies in small compass. Of actual *knowledge* we have simply nothing. Those who believe in a Creative Spirit and Ruler of the Universe are forced to admit that they

can adduce no proofs or arguments cogent enough to compel conviction from sincere minds constituted in another mould. There are facts, indications, corollaries, which seem to suggest the great inference almost irresistibly to our minds. There are other facts, indications, corollaries, which to other minds seem as irresistibly to negative that inference. Data, admitted by both, appear of very different weight to each. The difficulties in the way of either conclusion are confessedly stupendous. The difficulty of conceiving the eternal pre-existence of a Personal Creator I perceive to be *immense;* the difficulty of conceiving the origin and evolution of the actual Universe independently of such Personal Creator I should characterize as *insuperable*" (pp. v. and vi.).

It must be admitted that there is a strong tinge of atheism in this, and that the effort made by our author to remove that tinge is rather a feeble one—evidently not so strong as Mr. Greg could have made it. Perhaps this is merely because he deems it superfluous to adduce more cogent reasons. But the reader can judge better when he has seen what are the author's views on another fundamental Christian dogma:

"Again, visible and ascertainable phenomena give no countenance to the theory of a future or spiritual life. It is a matter of intuitive conviction, or of deduction from received or assumed doctrines, not of logical inference from established data. I cannot demand assent to it, with any justice or on any plea of *cogent* argument, from a reasoner who is destitute of my intuitive conviction, or who deems my deductions erroneous, or demurs to the doctrines from which they flow. But, on the other hand, since I can specify undeniable indications which point in that direction, and difficulties which to all appearance that hypothesis only can elucidate, and since he can in no way demonstrate its untenability or its contrariety with known truths, I am entitled to hold it as to me, though not to all, the most credible belief" (pp. vii. and viii).

It cannot be denied that this is very much in the style of some of Hume's Essays, where, for example, the philosopher says, in substance, "Such and such things are so; what is the inference from them?" Voltaire, it will be remembered, sometimes adopts the same suggestive, insinuating style of argument. "These seem strange things," says the arch scoffer, sarcastically, "but when we view them with the eye of faith, as of course we are bound to do, all the strangeness vanishes and we see nothing but what is pious and good!" The *modus operandi* of Mr. Greg is somewhat different, but scarcely less marked with the "infidel" stamp. One more extract from his elaborate preface will, we think, render this sufficiently evident:

"We all recognize instinctively that a sense of identity, a conscious continuity of the EGO, is an essential element of the doctrine. A life beyond the grave, in other worlds and under other conditions of corporeal or spiritual existence, but devoid of this main feature, would not, it is evident, answer the purposes of the doctrine, nor fulfil those yearnings of the heart and soul which many writers hold to be its most convincing indication. Apart from this consciousness of personal identity, a future life would be simply a new creation,—the beings who came into existence would be other beings, not ourselves awakened and renewed" (p. ix).

In chapter vii., entitled "Elsewhere," the same subject is discussed still more elaborately. Those who are curious to know what an acute investigator and liberal thinker has to say on the subject of hell and its supposed torments, will find this chapter quite interesting. For our own part we prefer the chapter on "Human Development;" but perhaps that preference results from the fact that Mr. Greg's views on the development theory are substantially the same as those we have been putting forward for years in this journal. Our readers are aware that we have always opposed the theory that man is constantly improving in intellect under favorable circumstances, because if it were true, the present generation would have better poets, orators, dramatists, artists, etc., than any previous generation, which is confessedly far from being the fact. But first let us see what is our author's idea on the most essential requisite of intellectual greatness of any kind:

"Why does Genius ever wear a crown of thorns, self-woven, and inherent in the very conditions of its being? Why does a cloud of lofty sadness ever brood over the profoundest minds? Why does a bitterness, as of Gethsemane, mingle with or pervade the productions of even the serenest Intelligences, if all human emotion be not dead within them? Why have Statesmen, Philosophers, Warriors, and Poets,—men of action and men of thought,—men who have sought to influence and men who have sought to comprehend Humanity, in its wild fever and its strange anomalies,—why have so many of them, in the intervals of repose and at the close of life, been conscious of an indescribable melancholy and a sombre shadow, which yet had in it nothing selfish and nothing morbid?" (pp.156 and 157).

Those who would have this question answered must read on; but we must pass over a page or two. In the following passage some of the facts are as remarkable and unaccountable as they are undeniable:

"It appears, then, that the ultimate development of which the intellect is capable, and its highest possible attainments, can only be reached by an exclusive cultivation and attention which entails upon its physical companion impoverishment, weakness, and disease. But this is not all. It seems even that bodily pain and disease are not only compatible with, but may indirectly contribute to, the loftiest efforts of the intellect. They sometimes positively enhance its powers. The effect of some disorders and of certain sorts of pain upon the nerves tends to produce a cerebral excitation: and the stimulus thus communicated to the material organ of thought renders it for the time capable of unusual effort. Men under the stirring influence of severe pain are capable of a degree of imaginative and ratiocinative brilliancy which astonishes themselves and all who have known them only in ordinary moods of comfort. Extinct faculties come back to them. Torpid faculties become vigorous and sparkling. Forgotten knowledge is recovered. Marvellous gleams of insight are vouchsafed to them. The wonderful eloquence of Robert Hall was doubtless greatly owing to the stimulating influence of a terrible spinal malady. Dr. Conolly mentions a gentleman whose mental faculties never reached their full power except under the irritation of a blister. Abnormal and unsound conditions of the bodily organs sometimes give us glimpses of mental powers and possibilities far exceeding anything of which ordinary health is

capable. The phenomena of some nervous disorders are positive revelations, and most startling ones, of what the human intellect, disengaged from matter or under favoring material conditions, might achieve and learn" (pp. 169-171).

But our space is closing up, while many points remain in the volume before us, nay, in the one chapter just now under consideration—to which we should like to direct the attention of our readers. We must, however, make room for one passage more:

"That the design of the Creator, and therefore the duty of man, upon earth, is not the highest development of the *Individual*, but the perfection of the *Race*. The former, as we have seen, must inevitably be reserved for other conditions or another state: the latter is attainable in this. Nature has placed, if not impassible barriers in our upward path, at least warning beacons against the attempt to overleap them. She has not only cautioned us against the *extreme* cultivation of the intellectual and spiritual man, but has condemned that cultivation by assigning disease as its inevitable consequence and condition. In forbidding us to surpass the limits of the *thoroughly* BUT HARMONIOUSLY *developed* specimens of Humanity, she has assigned to us the welcome and feasible task of *bringing up the whole human Race to those limits:* not to make strong and healthy frames into Herculeses and Athletes, not to make wise men into Platos, Bacons, or Goethes, not to make saintly men into Wesleys, Xaviers, and St. Bernards, but to make all men vigorous and sane, wise, good, and holy, in the measure of their just and well-balanced capacity; not to urge the exceptional few to still more exceptional attainments, but to bring the many to the level of the few. Two glorious futures lie before us: the progress of the RACE here, the progress of the MAN hereafter History indicates that the individual man needs to be transplanted in order to excel the Past. He appears to have reached his perfection centuries ago. Men lived then whom we have never yet been able to surpass, rarely even to equal. Our *knowledge* has of course gone on increasing, for that is a material capable of indefinite accumulation. But for power, for the highest reach and range of mental and spiritual capacity in every line, the lapse of two or three thousand years has shown no sign of increase or improvement. What Sculptor has surpassed Phidias? What Poet has transcended Æschylus, Homer, or the author of the Book of Job? What devout Aspirant has soared higher than David or Isaiah? What Statesmen have modern times produced mightier or grander than Pericles? What Patriot Martyr truer or nobler than Socrates? Wherein, save in mere acquirements, was Bacon superior to Plato? or Newton to Thales or Pythagoras? Very early in our history individual men beat their wings against the allotted boundaries of their earthly dominions; early in History God gave to the Human Race the types and patterns to imitate and approach, but never to transcend" (pp. 194-196).

We wish all boasters of the superior intellectual greatness of the nineteenth century—those who boast of that century chiefly because it is their century—would meditate somewhat on the passage just quoted. It may teach them to be modest, if not to be wise; and there are not a few other passages in Mr. Greg's book of which the same may justly be said, notwithstanding the fact that he undoubtedly lays himself open to the charge of covertly favoring the views of the atheist. This is of course a great defect, but as we have already remarked, it would be absurd to maintain that so interesting and brilliant a book

should not be read and discussed because the author, while claiming to be a believer in the fundamental dogmas of Christianity, seems to be at heart one who doubts that the universe is the work of an all-wise Creator. Such doubts, if they really exist, avail nothing. Suffice it to remember that in addition to what reason teaches even the most ordinary observer, not one out of every hundred of the world's greatest thinkers have entertained the slightest doubt that the universe is the work of a Divine Artificer, who is also its Ruler.

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1. *Illustrated Catalogue of Optical Instruments.* 8vo. Brochure.
2. *Illustrated Catalogue and Descriptive Manual of Meteorological and Philosophical Instruments and School Apparatus.* 8vo.
3. *Illustrated Catalogue of Magic Lanterns, Stereoscopticons and Dissolving View Apparatus.* New York and Philadelphia: JAMES W. QUEEN & Co., Manufacturing Opticians. 1873.

WHILE by no means claiming to be an adept in the use of even the majority of the instruments described in these catalogues, we know sufficient of them to make us feel that we could not regard ourselves as true friends of education, capable of appreciating the value of knowledge, did we fail to present them to the attention of such of our readers as may have no adequate idea of the power they place in the hands of those who learn to use them intelligently and efficiently. This, of course, presupposes that the instruments are good specimens of their kinds, respectively; a fact which, however, we should be sorry to vouch for merely from their descriptions in the catalogues, although were we to accept the word of any manufacturers as to the qualities of their own goods, we certainly would accept that of the gentlemen who issue the *brochures* before us. But we always prefer to see and judge for ourselves. It is precisely because we have pursued that course in the present instance that we now take up the catalogues. We have spent hours in seeing some of the most important and most interesting optical and philosophical instruments tested by gentlemen connected with the establishment of Messrs. James W. Queen & Co., who, before occupying their present position, had been well and favorably known as teachers. And how well we were pleased with the results may be inferred from the fact that we have purchased as large a variety of the Queen instruments, ourselves, as we have felt that our limited resources would justify us in purchasing. To this we cheerfully add that the more we have used the articles we have selected the more we have been convinced of their excellence; so that at this moment we should almost as soon think of parting with our favorite copies of Virgil and

Homer as with the instruments from which we have already derived so much pleasure and instruction.

We are quite aware of the opinion so prevalent among a certain class, that when editors commend even philosophical instruments they do so because they are paid for it. Whether this charge be well or ill-founded, in general, we can say for ourselves, without fear of contradiction, that we have never asked or accepted any pay for our editorial opinions. And had it been otherwise, we certainly would have made an exception in favor of those who, like the manufacturers and importers of these instruments, not only facilitate the acquisition of knowledge by their skill and enterprise, but also afford the student a means of delightful recreation.

Nor have the gentlemen who issue these pamphlets ever asked us to say one word of their instruments, or of themselves. We can truly say, then, that we have no more mercenary object in inviting attention to the great improvements made within the last three or four years in the manufacture of philosophical instruments, in this country, and to the increased enterprise evinced in the importation of the best European instruments, than we have in taking up and discussing, for a similar purpose, the works of the great thinkers of antiquity.

To us it is, we confess, a veritable treat, after a hard day's toil, to spend an hour among those instruments—those silent, yet eloquent, interrogators of nature—especially when made to feel that we are not intruders, but the welcome guests of men who have devoted more than an apprenticeship, in the school-room, to the labors and duties of successful teachers. Whether one has a preference for electricity, galvanism, magnetism, meteorology, or optics, he has an equal opportunity of gratifying his taste. If astronomically inclined, he may use a much finer instrument, and one of greater power, than that with which, as Milton tells us, the "Tuscan artist,"* viewed the moon:

> "At evening from the top of Fesolē
> Or in Valdarno, to descry new lands,
> Rivers or mountains in her spotty globe."

It is not alone in colleges, polytechnic institutes, academies and schools that the most important of those various kinds of instruments are used in all the principal countries of Europe. Among the cultivated classes in France, England, Italy, and Germany, no private residence is regarded as fully furnished without, at least, two or three philosophical instruments, especially optical instruments.† Indeed, with few

* Galileo.

† We are pleased to notice also in this country the increasing demand for works of artistic elegance and taste. This seems to be especially great in Philadelphia, if one may judge by the large importations of elegant articles of taste from all parts of the world, by S. A. Harrison, whose extensive collection of works of art have given his establishment the *soubriquet* of "The Vatican."

exceptions, the very best to be found in any of those countries, are not in public institutions, but in the observatories, or libraries of private gentlemen; for it must not be supposed that Lord Rosse is the only nobleman who owns a better telescope than any, even of the great scientific schools. Within the last decade the spectroscope, also, has found its way into a large number of the families of the wealthy and refined, especially in France and Italy. As for the microscope, it has secured a permanent place among the *Penates*, and is deemed as indispensable among the more intellectual of the nobility of those countries as the butler or footman—not a small microscope that costs a few shillings, but one of the best and most valuable kind—often one worth a coach-and-four, and which costs as much.

Now, we see no reason why a similar taste may not be developed in this country, especially as quite a considerable number of American gentlemen have already adopted that highly exemplary European habit. It is certain that by no other means could they render the acquisition of knowledge more attractive to their sons or daughters—by no other means could they enable them to enjoy so much harmless, refined pleasure, while storing their minds with interesting and instructive facts.

APPENDIX—INSURANCE: GOOD, BAD AND INDIFFERENT.

1. *Fourteenth Annual Report of the Superintendent of the Insurance Department, State of New York. Part II. Life and Casualty Insurance.* 8vo. 1873.

2. *Seventeenth Annual Report of the Insurance Commissioner of the State of Massachusetts. January*, 1872. *Part II. Life and Casualty Insurance.* 8vo.

At a crisis like the present, when defalcations and failures are occurring in all sorts of establishments, whose chief claim to public patronage and public confidence is their supposed wealth and stability, —their ability to accommodate business men with large sums of money—it would not be fair to select the insurance companies as particular subjects of censure and condemnation. The injustice of such a course would be enhanced in no slight degree by the fact that the worst of those companies will compare favorably with parties who have deceived and defrauded the public in many other kinds of business.

It is but just to remember that the failure of two or three banking-houses, which have closed their doors recently, has done more mischief to the country than all the failures of insurance companies that have occurred in several years. In other words, a much larger number of persons have been deceived and ruined by the failures of banking-houses which have occurred in three or four days, than have been deceived and ruined by the failures of insurance companies in as many years.

At the same time no sensible, intelligent person denies that banking-houses are useful institutions. No merchant or business man will be prevented from making deposits in our banks, though half of them should fail, and we have always held that the failure of a certain number of insurance companies should not be viewed in any more unfavorable light. It would be absurd to regard all banks as unsafe because a few have failed, and ruined some of their depositors; but it is still more absurd to regard all insurance companies as unsafe because a few have failed, and perhaps, defrauded their policy-holders, since, as already remarked, the injury done by the failure of an insurance company is comparatively trifling in its general results.

We need not remind our readers that none have criticised the speculators and sharpers among underwriters more or oftener than we. None have more freely denounced them; none have more earnestly warned the public against their machinations; nor is it necessary for us to claim that our denunciations and warnings have proved but too well founded, for not a single life company has failed within the last five years whose failure we had not often predicted, as a necessary result of its lack of resources, its lack of honesty, its lack of intelligence, or of all combined.

But all this is no reason why we should regard the insurance sharpers and cheats as if there were not still worse sharpers and cheats than they. Whenever we have seemed to evince particular ill-will toward them we have been prompted to it by the contrast which those persons present to those of our underwriters who fairly represent the profession in America. Probably the worst of the insurance sharpers would not have seemed to us particularly bad had they connected themselves with other branches of business; the same as men who shock public decency by their conduct as clergymen or physicians would scarcely have been noticed for the same conduct or even worse, had they connected themselves with the guild of butchers, of liquor dealers, of whiskey-shop politicians. In short, it is because we have always regarded legitimate life insurance as essentially beneficent in all its tendencies, that we could hardly imagine any worse men than those who, for sordid gain, would destroy its prestige by habitual deception and fraud. We can all the better afford to pass over this class at the present crisis, from the fact that it required no general

financial crisis or panic to cause their false pretences to fall to the ground, and exhibit themselves to the world in their true character, as a warning to all who would imitate their example. Nor can any one who calmly reflects on the downfall of these men, and the course of conduct which rendered it inevitable, have a whit the less faith in the advantages of life insurance on account of that downfall. It may seem a paradox to say that so natural and logical a termination of the career of such underwriters should be regarded far more as a vindication of legitimate life insurance, than as any argument against either its advantages, or its permanence and stability.

Instead, therefore, of indulging in any extensive criticisms this time, we will present our readers the views of the New York superintendent and the Massachusetts commissioner in regard to the past, present and future of insurance. We cannot say that the views of either are very profound, but both seem honest men, and honesty in a public functionary is better than profundity. Speaking of the progress of life insurance the superintendent proceeds:

"Table No. 1 gives a history of the growth of Life Insurance, as compiled from the records of this department, since its creation in 1859. By reference to that portion of it which gives the combined figures of all the companies doing business in the State, it will be seen that in that year, fourteen companies reported they had in force 49,608 policies, insuring $141,497,977.82; and that, of gross assets, they had $20,536,084.58; that their gross liabilities, excepting capital stock, were $15,464,936.44; thus leaving them a surplus as regards policy-holders of $5,071,148.14. In 1870, eleven years later, there were seventy-one companies doing business here, having 747,807 policies in force, insuring $2,023,884,955, with $269,520,440.76 gross assets, and having gross liabilities to the amount of $221,032,146.22, thus leaving a surplus of $48,488,294.54. This growth had been very uniform, and was most remarkable. Year by year the number of policies, the amount insured, the gross assets, the gross liabilities and the surplus, each and all, steadily and astonishingly increased. But during the years 1868 and 1869, alarming perturbations were noticed, and immediately thereafter indications became clear and unmistakable that the tide had turned. Thus, while the number of companies doing business here had increased fourteen during the year 1869, but two companies entered the field of competition in 1870, and in 1871 there was a falling off of three companies, while in 1872 the number decreased eight more. This reduction in the number of companies very naturally caused a corresponding diminution in the yearly addition to the number of policies in force at the end of each previous year. Thus, in 1869, there was an addition of 118,978, in 1870 there was an addition of but 91,235; 1871 added but 37,553, 1872 but 19,084. The amount insured in 1869, over the amount of 1868, was $307,633,133.65; in 1870 there was an addition of but $187,267,136.03; 1871 added but $77,576,879, while 1872 added but $13,280,757. In 1869 the assets of the preceding year were increased by $52,204,695.86, while in 1870 they were increased but $41,753,425.19; 1871 added but $33,037,758.47, while 1872 added but $32,610,343.47. In 1869 the liabilities of the previous years were increased $44,507,013.17, while in 1870 they were increased but $40,718,174.86; 1871 added to former liabilities but $33,519,634.97; while 1872 added $33,775,325.59. The surplus, over that of the year previous, also, which in 1869 was $7,997,682.69, in 1870 was increased but $1,035,240.33; 1871 presented a

decrease instead of an increase of $481,876.50, and 1872 a still further decrease of $1,164,982.12. The constant tendency of these figures, although varied by exceptional causes, some of which are readily ascertainable, is steadily upwards until 1868. For a year or two there is a wavering among the columns, and thereafter the tendency is almost uniformly downwards. The same thing is apparent in that part of the table confined to companies of other states doing business in this State. It is no less marked, although, perhaps, a little more irregular, in that portion devoted to the history of the growth of our own State companies."

The Massachusetts commissioner does not use many figures, but he substantially corroborates the statement of his New York confrère:

"The statement made in our last report in regard to the progress of life insurance in the United States, then predicated upon the exhibit of 1870 and some previous years—namely, that although the business had gone on increasing, its volume in that direction was making slower *advance*—cannot now be safely reaffirmed. While the ratio of growth was reasonably fair in 1869-70, the constantly ebbing tide of expansion denoted a speedy approach to another turning point which has now been reached, as shown by the statistical results just presented. But when the causes which produced the sudden and extraordinary growth at one time reached by the business in this country are properly understood, the more moderate pace at which it now proceeds will seem but the very natural and necessary sequence. There is in this, however, no ground for discouragement in regard to the prospective interests of the business.

"As already indicated, the remarkable and unprecedented advance of life insurance accomplished its longest stride in 1866. Its most rapid expansion, extending from 1864 to 1868, inclusive, rising from $382,569,890 to $1,981,915,920, may be fairly presumed to have resulted from the combined operation of several causes. Being an institution of real and intrinsic value, it was inevitable that, as soon as companies were established in this country, and in readiness to issue policies on lives, people should hasten to avail themselves of the opportunity so auspiciously presented. The institution possessed something of the charm of novelty, and was eagerly sought for. The want was wholly unsupplied; but as soon as the means for its satisfaction were known and understood, the supply rushed in to meet the demand as suddenly as air rushes into a vacuum. The marvellous alacrity with which life insurance was taken up cannot, however, be wholly explained in this way. Savings banks meet a real want, as well as life insurance companies; and yet their introduction and multiplication have been steady and gradual, not quick and sudden. Life insurance has been successfully introduced into other countries besides America, without at once attaining the gigantic proportions already reached in our own—a fact from which many suggestive lessons may be drawn."

Mr. Chapman's remarks on contraction are worthy of perusal. We subjoin a paragraph or two:

"Three methods present themselves: *First*. By voluntary retirement from active business, and a gradual and honorable winding up of affairs; *Second*. By the forced withdrawal of a company, under the action of the superintendent and attorney-general, which dissolves the corporation; *Third*. By a system of reinsurance known as amalgamation. Since the organization of the department, no company, with the exception, perhaps, of the New York Life and Trust, has adopted

and steadily followed the first course, and hence little consideration need be given it. A word or two may not be inadmissible as to the second method of reduction. It seems to the superintendent, as a general proposition, that, while the business of life insurance is languishing, a little more elasticity may be safely allowed to the asset side of a company's statement than at a time when it is brisk and constantly increasing. Items absolutely valueless should, of course, always be rejected; but an item possessed of some value, although known as "questionable" in general, may be judiciously admitted as worth something, if, by so doing, a company can be tided over the shoals of one year into the smooth waters of another, thus saving the shock to the system of insurance caused by every wreck. But such an asset admitted in one company should be admitted in all, or relative injustice would be done. In other words, the same asset should be allowed to all companies presenting it. In drawing a line, however, between admissible and inadmissible assets, which shall do injustice to none, it can be given a different place in different years It is submitted, that each year this line ought to be moved higher so as to leave below it some questionable asset that had been previously allowed, till all such should be eliminated. The stringency should maintain a constant tendency toward greater security, and the line should be kept close up to that point which will leave a bare surplus to some company. Of course, it should never be placed so high as to cut off any sound item of assets, nor should it ever be placed so low as to save any company which is insolvent or unsound. When, after making all reasonable and safe allowances, a company is *found to be irretrievably unsafe, it must be dissolved.*"

That a goodly number are "irretrievably unsafe" is but too true. Mr. Clark's outline of "companies admitted and withdrawn" will serve as an appropriate pendant to Mr. Chapman's remarks:

"While only fifty-six Life and Accident Companies are now authorized in Massachusetts, the *detailed statements* of the present report include three or four whose retirement has taken place since their publication was commenced. The tabulated results appearing in the text of the report, however, represent only those authorized in the State.

"One new company, the Republic Life, of Chicago, whose financial and business statements will be found in their proper connection in these pages, has been admitted since the last report, and nine others have retired.

"The Commonwealth Life, of New York, voluntarily withdrew early in the year; not from any lack of confidence on the part of the Commissioner, but simply for the purpose of curtailing its business to smaller, and consequently less expensive and more easily managed, territory. The Delaware Mutual, admitted in 1870, has also withdrawn, for similar reasons. The International Life and Trust Company, also admitted in 1870, has ceased doing business in the State.

"The Craftsmen's has consolidated its business and reinsured its risks with the Hope Mutual; the Empire Mutual, which last year reinsured the out-standing risks of the American Tontine and the Farmers and Mechanics', and also assumed the American liabilities of the International Life Assurance Society of London, England, has now perfected a similar negotiation for itself with the Continental; the Amicable Mutual has reinsured with the Guardian Mutual; and the Mutual Protection, after having absorbed the Widows and Orphans' Benefit, and changed its own name, under legislative sanction, to the Reserve Mutual, has finally merged itself, with its outstanding risks, in the Guardian Mutual; the Hercules Mutual, by dint of mismanagement and inexperience, has fallen into the hands of a receiver;

but arrangements are reported in progress for the reinsurance of its limited amount of risks. Thus ends the *mortuary* record of companies for the present report."

Now we come to Amalgamations, another interesting subject. The fact that one company amalgamates with another is not by itself a reflection on either. Policy-holders must judge by the circumstances of the case. There are a large number of companies whose prestige would be vastly improved by amalgamation. Thus, for example, it is no exaggeration to say that there is not one of the Massachusetts companies whose prestige would not be improved by amalgamation with the New England Mutual; but we are by no means sure that sterling institution would accept the amalgamation of the best of them.

At least two-thirds of the Hartford companies would improve their reputation by amalgamating with the Phœnix Life—that is, provided that sturdy company would accept the conditions. We may seem unkind, if not actuated by diabolical motives, if we say this is true both of the Ætna Life and the Connecticut Mutual. Yet such is our sincere opinion. But, of the two, we would certainly admit the Ætna Life into combination with the Phœnix Life in preference to the Connecticut Mutual. Perhaps we are wrong in this, but we have never known the Ætna to refuse the payment of its little bills, which is more than we could say of the Connecticut Mutual. The Ætna, it seems, pays its little bills, but has become rather tedious of late in paying its big bills, especially its endowment policies and its annuities. It is said that there is a certain firm in Maiden Lane and John street, in this city, who can give a rather striking illustration of the Ætna's new plan. It is true that we are grossly misinformed if the Connecticut Mutual is not as much averse to paying its large bills as its small bills.

As for the Travellers' and Hartford Life and Annuity, we think the sooner they amalgamate with some respectable company the better. But let us hear what Superintendent Chapman has to say on the subject:

"By the laws of 1853, chapter 463, section 1, as amended by the laws of 1865, chapter 328, section 1, it is provided that: 'Every company organized under this act shall have authority to reinsure any risk, herein authorized to be taken.' Power to insure 'any' risk, would seem to include power to insure all. The question whether the reinsured policy-holder has any adequate remedy against his company or its officers for a wrong done him, and the no less important one, whether the policy-holder in the company reinsuring has any adequate remedy against his company or its officers, for injury done him, is left as a purely legal question, to be finally settled by the courts. The law seems to give absolute authority to any company organized under the act of 1853, to make a contract of reinsurance, partial or total, with any other company. But while to reinsure may be legal, the *manner* of doing it may be illegal. Here would seem to be the vulnerable point of attack. A judicious assault here might disclose fraud and corruption in some instances, on the part of officers, that would well repay the trouble

and expense of a trial. But, however, this may be, and however reprehensible the practice, of 'wholesale insurance,' the superintendent has been unable to find, in existing law, any provision which gives him the slightest practical control over it. The contract can be made without his knowledge or consent, and until some law is passed, prohibiting, or giving him authority to regulate or prohibit the making of such contracts, he is absolutely powerless to interfere in the premises. Examinations, no matter how frequent, will not touch the evil. He might enter the office of a company, and examine and re-examine perpetually, and yet, so long as the company complies with the law, and has one dollar of surplus, he can do nothing to prevent the making of such a contract. Whether he should have the power given him to prevent it, is a very grave question, and will be referred to in another connection."

Mr. Clark discusses the objections which some of the policy-holders have to amalgamations in which they have had no voice:

"A course, however, which is frequently adopted by companies that have failed to meet with all the success which they anticipated, is to transfer their business to some other company. This is done by way of reinsurance, the policies of the unsuccessful or retiring company being reinsured in a mass in the other company. Such a transfer is properly termed an amalgamation, and is different from a consolidation of the two companies by an act of the legislature. But reinsurance does not put an end to the legal existence of a company. The Massachusetts statute (Chapter 349 of the Acts of 1870,) relating to this matter only forbids reinsurance of fire and marine risks in companies not represented in the State. If the company in which the reinsurance is obtained is so represented, the statute does not prohibit a reinsurance of all the policies of a company. But this does not affect life insurance, and there would seem to be no statute in force in this State against amalgamations. It is for the Legislature to say whether they ought to be regulated by law, and a statute passed for the purpose.

"Since the valuations for 1871 were commenced by this Department, several of the companies doing business in the State have been amalgamated, and large numbers of the policy-holders in those companies have made complaint that their rights and interests have been sacrificed by the process. Their feeling is very strong that they have some rights which should entitle them to a voice in such disposition of their interests. As there is no right of action on a policy of insurance until after the death of the party insured, and as a right of action, if any existed, against a company which had transferred its whole business, would be of no practical value, no opportunity is given to the policy-holder of making any election. He is practically compelled, whether he wishes to do so or not, to look to a different company for the performance of a contract entered into with another. If he accept a dividend or any advantage from the new company, or even if in order to prevent a forfeiture of his policy he make a payment of a premium to it, he may find that these acts are construed as an election binding him to that company exclusively; and he may also find himself, without his knowledge or intention, deprived of his technical right of recourse to the original company."

But we will make room for Mr. Chapman's table showing the number of amalgamations made by New York companies from 1859 to April, 1873. In this table will be found every one of the companies whose untimely end we had predicted:

NAME OF COMPANY.	CEASED BUSINESS.		CAUSE.
1856.			
Howard Life Ins. Co.....	February	7	Reinsured in United States Life Insurance Company. Balance of securities deposited in Insurance Department surrendered in 1861.
1868.			
Provident Fund and Life Ins. Co.....	February	11	Substantially did no business. See report of this Department of 1868.
1870.			
Ben. Franklin Life Ins. Co...	October	6	Reinsured in United States Life Ins. Co.
Great Western Mutual Life Ins. Co.....	December	19	Closed at suit of Attorney-General.
1871.			
Farmers and Mechanics' Life Ins. Co.....	January	9	Closed at suit of Attorney-General.
American Tontine Life and Savings Ins. Co.....	May	2	Reinsuring in Empire Mutual Life Ins. Co.
Standard Life Ins. Co.....	July	27	Reinsuring in Government Security Life Ins. Co.
Widows and Orphans' Benefit Life Ins. Co.....	October	19	Reinsuring in Mutual Protection Life Assurance Society of the United States.
1872.			
Amicable Mutual Life Ins. Co.	February	1	Reinsuring in Guardian Mutual Life Ins. Co.
Empire Mutual Life Ins. Co..	June	10	Reinsuring in Continental Life Ins. Co.
Mutual Protection Life Assurance Society of the United States or Reserve Mutual Life Ins. Co.....	June	17	Changed name to "Reserve Mutual Life" Ins. Co., February 14, 1872 (chapter 36, Laws of 1872), and reinsured in Guardian Mutual Life Ins. Co., June 17, 1872.
Craftsmen'sLife Assurance Co.	August	14	Reinsuring in Hope Mutual Life Ins. Co., and Mr. Francis W. Worth, of New York, appointed Receiver by the Supreme Court, at suit of a judgment creditor.
Empire State Life Ins. Co....	September	18	Reinsuring in the Life Association of America.
New York State Life Ins. Co.	December	17	Reinsuring in Guardian Mutual Life Ins. Co.
Excelsior Life Ins. Co.....	December	31	Reinsuring in National Life Ins. Co. of the United States.
Hope Mutual Life Ins. Co....	December	31	Reinsuring in New Jersey Mutual Life Ins. Co.

This, be it remembered, only includes the New York companies that have amalgamated within the brief period mentioned.

The companies from other States which have amalgamated within the same period are the following:

NAME OF COMPANY.	CEASED BUSINESS IN THIS STATE.		CAUSE.
1863.			
American Mut. Life Ins. Co.	October	28	Certificates of authority revoked by Superintendent.
1870.			
United Security Life Insurance and Trust Co.....	December	31	Withdrew from State.
1871.			
Hahnemann Life Ins. Co...	December	31	Withrew from State; reinsured in Republic Life Ins. Co., Chicago.
Safety Deposit Life Ins. Co.	December	31	Withdrew from State.
1872.			
National Life Ins. Co.....	September	27	Certificates of authority revoked by Superintendent.
International Life Ins. and Trust Co.....	December	26	Withdrew from State; reinsured in United States Life Ins. Co., New York.
Anchor Life Ins. Co.....	December	28	Certificates of authority revoked by Superintendent.
Nat'l Capital Life Ins. Co...	December	31	Withdrew from State; reinsured in Penn Mutual Life, Pa.

Now, if the reader will examine these two tables carefully, he will find each much more interesting than it would seem at first sight. It is certain that the policy-holders of Howard Life were fortunate in being transferred to the United States Life. The same is true of the policy-holders of the Empire Mutual in being transferred to the New York Continental, and certainly the policy-holders of both the Amicable Mutual and International Life had a happy deliverance when taken charge of by the Guardian Mutual. It is otherwise, however, with those of the National Capital Life. The prospects of the latter were indeed never very bright; but we cannot see that they have been much improved by transference to the Penn Mutual.

In short, as already intimated, we should be decidedly in favor of amalgamation in instances like those of Continental Life, the United States Life, and the Guardian Mutual. We could even go so far as to favor the amalgamation of the Mutual Life and the New York Life with the Manhattan Life and the Equitable Life. At the present moment these amalgamations may not seem likely to be ever made; but much greater and more important changes have been produced by time—even by a few brief years. It may be remembered that we did not wait for the conviction of the president of the Mutual Life of "sundry fraudulent practices" to inform our readers that there are companies which do not boast of one-fourth as large a pile of money as the Mutual Life that are nevertheless vastly safer than that company. This is true, for example, of the modest National Life of New York. We never said or meant that the National Life was rich, but we have said, more than once, that it is richer in proportion to its indebtedness than the Mutual Life. Some three or four years ago this seemed an exaggerated statement. Few believed it; now, on the contrary, few capable of judging doubt it.

As there are rumors just now of new amalgamations, we may be permitted to express the hope that if any of the solid, sound, and honorable companies, already mentioned as affording ample protection, should decline the combination, the policy-holders would still be perfectly safe if the North American Life, the Mutual Benefit, or the Charter Oak could be induced to cover them with its protecting mantle.

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